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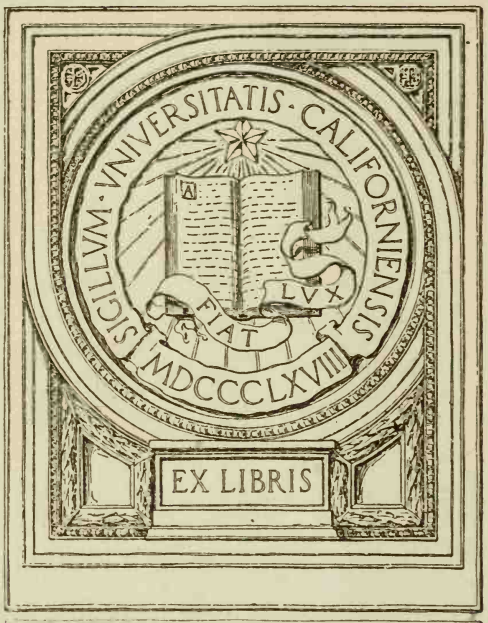

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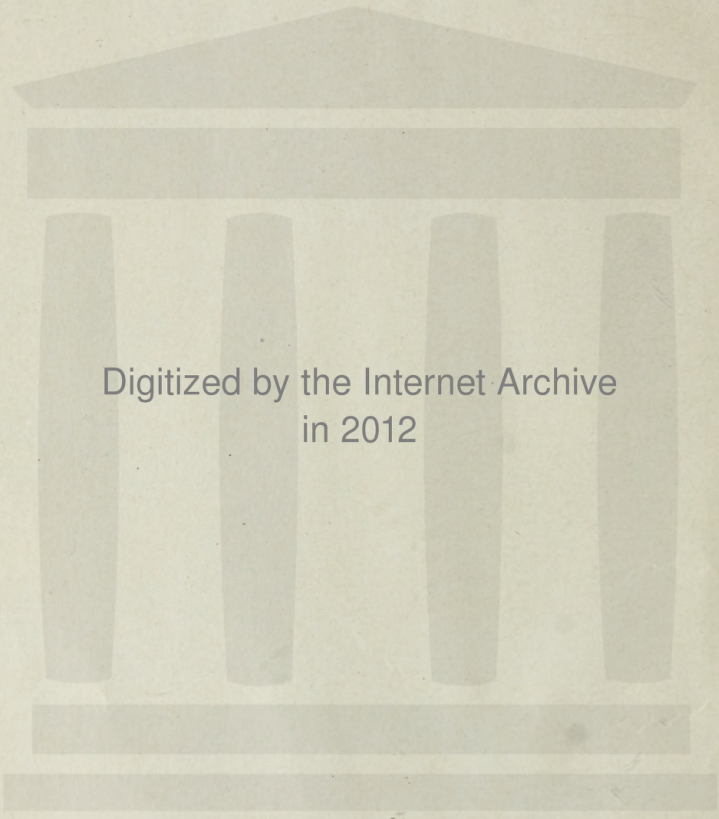

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THE

NATIONAL FORMULARY

OF

UNOFFICIAL PREPARATIONS.

THIRD EDITION.

THOROUGHLY REVISED AND ENLARGED.

BY AUTHORITY OF THE
AMERICAN PHARMACEUTICAL ASSOCIATION.

PUBLISHED BY THE AMERICAN PHARMACEUTICAL ASSOCIATION.
BALTIMORE, MD.
1906.

UNIV OF CALIF
MEDICAL SCHOOL

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PREFACE TO THE THIRD EDITION.

THE completion of the second revision of the National Formulary, marking an era of a full decade since the first revision was effected, has necessarily been delayed because of the belated appearance of the United States Pharmacopœia VIII. Nevertheless, the Committee had the satisfaction of presenting the text for the present revision at the Atlantic City meeting of the Association, a consummation which is particularly gratifying when it is considered that much of the work of revision could not be finished until the revised edition of the Pharmacopœia was available, and that the task of converting the Metric quantities given in the formulas into their alternative equivalents in the Apothecaries' system of weights and measures was both exacting and arduous. This particular feature, and the introduction of doses, are the two most conspicuous innovations that have been made, and it is believed that they will very materially add to the utility and, it is hoped, popularity of the "Formulary." Another innovation consists in the separation of the formulas for obsolete U. S. P. preparations from the main text of the Formulary and collecting them in an "Appendix" to it, including the formulas which have been dismissed from the Pharmacopœia of 1900—the original text of these formulas being restored or maintained; but, as in the main text, the alternative values are also given in Apothecaries' terms, so as to render the work uniform throughout in this respect. In accordance with the expressed desire, an attempt was made to devise short synonyms or abbreviated titles for some of the lengthy ones now in use; but this virtually remained an attempt, having been found practicable only in a few instances. Short titles, however, have been given to the new formulas whenever this was feasible.

The number of new formulas added to the "Formulary" is 49, while 15 formulas, having been admitted into the new Pharmacopœia, have been dismissed. On the ground of inefficiency for the intended pur-

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pose, two formulas also—Carbassus Carbolata and Carbassus Iodoformata—have been dismissed, reducing the actual increase to 32 formulas. A further, though only apparent, reduction is occasioned by the relegation of thirty obsolete U. S. P. formulas, heretofore given in the general text, into the "Appendix," but here they appear, together with 84 formulas dismissed from the U. S. P. VIII, and are consequently just as available for reference in the National Formulary as they have been heretofore, though no longer designated as "N. F." preparations.

In accordance with the recommendations made after painstaking experiments by the Sub-Committee on Correction of Formulas, about seventy formulas have been corrected so as to eliminate certain imperfections, usually of a trifling nature, and it is confidently believed that the formulas as now given in the Formulary are in unobjectionable shape.

January, 1906.

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PREFACE TO THE FIRST EDITION.
(1888)

It is well known that the remedies for which the Pharmacopœia prescribes definite standards, constitute only a limited portion of the resources of the medical profession in the treatment of the sick. Without referring to the more ephemeral preparations, or to such as are of a proprietary character, or are used by the public for self-medication, there is a large number of others, which are more or less frequently prescribed by physicians, or demanded by the public, but which are not recognized by the Pharmacopœia, either because they were not deemed by the revisers to be of sufficient importance to be included in the official work, or because they originated subsequently to the appearance of that work, or for other reasons. Owing to the absence of an authoritative standard, many of these unofficial preparations have been, and are being made, after different formulæ, and in varying strength, so that the pharmacists, particularly in the larger cities, are compelled to procure and keep on hand a variety of brands of what is intended to be one and the same preparation, to satisfy the demands of their patrons, professional or otherwise. The evils arising from this condition of things are so well known and so far-reaching in their results, that there is no need of any argument in favor of a plan which may palliate the existing evil, chiefly caused by a lack of uniformity, or the want of a common standard.

In order to bring about a practical amelioration of this state of things, a local Committee representing the College of Pharmacy of the City of New York, the Kings County Pharmaceutical Society of Brooklyn, and the German Apothecaries' Society of the City of New York, several years ago published a book of formulæ, comprising those which were in most frequent use in their immediate vicinity, and recommended the same to the medical profession. As this book appeared at a time which happened to be particularly favorable to the realization of the object sought to be attained, it gained so much ground, even outside of the locality for which it was originally intended, that the Joint Committee, authorized by the Societies which it represented, tendered the work to the American Pharmaceutical

Association, at the Annual Meeting held at Pittsburgh, in 1885, as a nucleus for the construction of a National Formulary. The Association having accepted the gift, a Committee was appointed to prepare such a work, and as a first result, this Committee presented at the next Annual Meeting, held at Providence, in 1886, a "*Preliminary Draft of a National Formulary*," comprising whatever the Committee had been able to gather, either from existing formularies, or from its own labors, or from the special contributions of individuals or societies. This Draft showed, more forcibly than could have been done in any other manner, how serious the existing evil was, and at the same time, how difficult would be the task to bring into harmony the conflicting views and customs. For the purpose of enabling the Committee to accomplish this task with better expectation of success, it was enlarged by the addition of one member from every State Pharmaceutical Association in the United States and Canada.

The Committee thus constituted has endeavored, to the best of its ability, to carry out the object for which it was appointed. While it was, of course, impossible for most of the members representing other States, personally to attend the weekly meetings of the Committee, held in New York City, yet all important matters were referred to them by circular, and their votes thereon solicited, so that the results, regarded as a whole, truly represent the intentions and decisions of the whole Committee, though individual members may not have agreed upon every detail.

One of the most difficult problems which the Committee encountered, was the selection of the preparations which should be admitted into the Formulary. In order to ascertain the wishes of the different sections of the country, a printed list of the proposed titles was sent to each member, and a vote or expression of opinion thereon asked for. After all the votes had been returned, it was evident that much would still be left to the discretion of the Editing Sub-Committee, which had in the meantime been appointed. The latter, thereupon, prepared a final list of titles, which was again submitted to the members, and this list having been slightly amended in accordance with the suggestions received, was made the basis of the final text, though in the course of editing some further changes, chiefly additions, became necessary in order to fill in existing gaps. On looking over the contents of the book, every individual reader will probably encounter quite a number of preparations with which he is unfamiliar, or which he has never had occasion to use or to dispense, and the presence of which, from his standpoint, may appear superfluous. It should, however, be remembered that every section of this large country had to be considered: hence, what may be entirely unused or only rarely used in one section, may be of common

occurrence in another. It is quite probable that some preparations which ought to have been received into the Formulary have been overlooked, or that some of those introduced are not as frequently employed as has been represented to the Committee. Whatever error may have been committed in one direction or another, will no doubt be corrected in subsequent editions.

While it was at no time contemplated by the Committee as a whole—though, perhaps, by some individual members—to devise imitations of any of the popular nostrums of the present day, yet it was very difficult to decide exactly where the line should be drawn. Consequently the list will be found to include a small number of formulæ which may recall some of the before-mentioned preparations, but which are constructed on rational principles, irrespective of mere external appearance and taste, and mainly with regard to uniform composition and reliable effect. It is not expected that these preparations will readily replace, in the eyes of the public, the much-advertised nostrums, but it is hoped that if proper therapeutic effects are expected from them, they will be used or directed to be used in place of the commercial articles, the composition of which is generally kept secret. A proposition was at one time made to include in the work definitions and descriptions of the more important crude drugs and chemicals which have come into use since the last U. S. Pharmacopœia was issued. But it was found that the labor involved in the task already outlined was so great, that no time could be devoted to any further additions. Hence the project had to be abandoned, though it will be a comparatively easy matter to incorporate these additions in a subsequent edition.

In constructing the formulæ of the compound preparations, it has been the endeavor of the Committee to make them as independent from each other as possible, so that only a comparatively small number of what may be called *basic preparations* need be kept in stock. The principal bases thus required are:

No. 25. Elixir Adjuvans. As a vehicle, chiefly for saline preparations.—No. 31. Aromatic Elixir. Intended to be used as a substitute for the officinal Elixir Aurantii, unless the latter or some other flavored Elixir should be preferred.—No. 42. Elixir of Cinchona.—No. 44. Detannated Elixir of Cinchona.—No. 54. Elixir of Yerba Santa.—No. 81. Elixir of Pepsin.—No. 105. Compound Elixir of Taraxacum.—No. 337. Aromatic Spirit.—No. 338. Compound Spirit of Orange.—No. 340. Spirit of Curacao.—No. 352. Syrup of Coffee.—No. 360. Aromatic Syrup of Yerba Santa.—No. 394. Detannated Tincture of Cinchona.—If these are kept in stock in reasonable quantities, most of the compound preparations contained in the Formulary may be prepared in a short time.

Regarding the system of weights and measures used in the work, the probable action of the Committee had been foreshadowed in their last Report to the American Pharmaceutical Association, in which they expressed their conviction that all medicines that are prescribed by *measure*, had better be prepared by measure, or by weight *and* measure. The Committee is of the opinion that the working formulæ, either in a Pharmacopœia or in a Formulary, need not all be forced into one rigid, immutable, and uniform system of weights or of measures; but that a judicious and common-sense selection of one or another system, in different formulæ of the same work, may be perfectly legitimate, so long as those used in one and the same formula are practically commensurate with each other—the object, in all cases, being to obtain uniform and definite products, the relative strength of which will be immediately understood without special calculations. While, therefore, the system of *parts by weight* has been unreservedly admitted in the case of such preparations as are always, or at least preferably, made by weight (for instance, No. 2, Acidum Carbolicum Iodatum; No. 10, Boroglycerinum, etc., etc.), definite weights and measures have been used in the case of all those which are taken or administered by measure.

In the choice of the terms expressing the different denominations of weights and measures, some variation will be noticed, which is, however, introduced designedly. For instance, in No. 197 (Linimentum Opii Compositum), the first item is 1½ fluidounces; the second, 120 grains; the third, 4 fluidounces; the fourth, 180 minims; the fifth, 6 fluidounces, etc. The term "180 minims" was preferred to "3 fluidrachms," to break the monotony of the *fluid* terms, so as to diminish the risk of a mistake. And this method has been applied also in many other cases.

Regarding the nomenclature, the Committee has selected what appeared to them the most suitable and expressive titles. Probably many of the preparations in the work will never be ordered under their Latin names, as for instance, "Pulvis Hydrargyri Chloridi Mitis et Jalapæ" ("Calomel and Jalap"); yet it was deemed necessary to introduce such titles, in order to secure a homogeneous alphabetical arrangement.

In the selection of the particular process or working formula for each preparation, the Committee has proceeded with all the care that it was possible to bestow upon it. All suggestions, recommendations and criticisms were carefully and impartially considered, and, whenever possible, practically tested. It is not to be expected, however, that the Committee has always succeeded in making the best selection. Indeed, many of the formulæ will, no doubt, hereafter, require modification to make them more perfect, after a suf-

ficient time has elapsed to fully test the merits of the different processes.

It was not within the province of the Committee to meddle with matters of which the medical practitioner or the therapeutist is the proper and competent judge. In most cases, it was sufficient to take a formula, just as it was already in existence, and to adopt it either entirely without change, or to restrict the modifications to the unessential features without affecting its therapeutic value, and merely with a view to improve its form. There are, however, a number of preparations in which more radical changes appeared desirable. In these cases the Committee availed itself of the advice of competent medical authorities, either by personal interviews or by correspondence.

The mission which this work is to fulfil can only be properly accomplished by the co-operation of the medical profession. It is, therefore, of the greatest importance that the members of this profession, throughout the country, be made acquainted with the existence, contents and objects of this book, and that, if the same be approved by them, as is confidently expected, they will consent to accept the preparations made in accordance with the formulæ contained therein, instead of designating any special maker's product.

In the execution of its task, the National Committee has been fortunate enough to avail itself of valuable advice and assistance, both voluntary and solicited, from many members of the profession and other sources. At the request of the Committee, the three Societies who had issued the pamphlet above spoken of, continued the several committees formerly appointed by them, and this increase of the working nucleus of the National Committee has been of the utmost importance to a successful termination of its allotted task, since without this assistance, it would have been physically impossible for it to perform the large number of experiments, and to prepare the many hundreds of specimens, necessary to decide on the merits of the various proposed formulæ. The gentlemen who have so generously assisted the Committee, and to whom special thanks are due, are: Messrs. Gustavus Balser, Julius Kalish, Edward L. Milhau, and Henry Schmid, from the College of Pharmacy of the City of New York; Messrs. Donald L. Cameron, Thomas D. McElhenie, J. P. Heyen, Louis E. Nicot, and Charles R. Paddock, of the Kings County Pharmaceutical Society; and Messrs. Theodore Louis, Charles E. P. Meumann, Gustavus Pfingsten, Gustavus Ramsperger, and Charles F. Schleussner, of the German Apothecaries' Society of the City of New York. Very valuable assistance has also been rendered to the Committee by the following gentlemen: Prof. Joseph P. Remington, Prof. J. M. Maisch, and Mr. Alfred B. Taylor, of Philadelphia; Prof. J. U.

Lloyd, of Cincinnati; Dr. Robert G. Eccles, of Brooklyn; Prof. Charles E. Munroe, U. S. N., of Newport, R. I.; Prof. Alfred M. Mayer, of Hoboken, N. J.; Messrs. Charles F. Heebner, W. M. Massey, and B. T. Fairchild, of New York; Mr. O. A. A. Rouillion, of Brooklyn; Mr. C. H. Bernhard, of Madison; and Mr. A. Conrath, of Milwaukee, Wis.; Dr. Charles Mohr, of Mobile, Ala.; Mr. J. H. Dawson, and Prof. W. T. Wenzell, of San Francisco; Messrs. R. B. Ferguson, W. S. Thompson, and G. G. C. Simms, of Washington, D. C.; Dr. A. B. Lyons, of Detroit, Mich.; Messrs. S. A. D. Sheppard, and J. W. Colcord, of Boston, Mass.; Mr. J. D. A. Hartz, of College Point, N. Y.; Mr. Albert E. Ebert, Prof. E. B. Stuart and Mr. Charles L. Feldkamp, of Chicago, Ill.; the Committee on Unofficinal Formulæ appointed by various State Pharmaceutical Associations during the last two years, and many others.

The Committee, on behalf of the American Pharmaceutical Association, now turns over its work to the public, and expresses the hope that it will be accepted as a standard and guide, whenever possible. In order that it may be rendered more perfect and complete, it is respectfully urged that any defects, omissions, or errors, be carefully noted, and that a list of these, as well as suggestions and propositions for a future revision, be sent to the Secretary of the American Pharmaceutical Association, or to any Formulary Committee that may hereafter be appointed.

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Quebec, Can . . . . . W. Ahern, Quebec.

* Deceased.

PREFACE TO THE SECOND EDITION.

WHEN the present Committee on National Formulary was appointed in 1888, the "Formulary" had just been issued, and embraced practically all preparations in established use for which no uniform or authoritative standard existed. The work was as nearly perfect as could be expected, but it was not to be supposed that so large a number of formulas as are embraced by the "Formulary" should prove uniformly satisfactory. As a matter of fact, the most frequent complaints that reached the Committee were made with reference to the imperfection—real or supposed—of certain formulas. These complaints have been carefully considered, and the necessary corrections have been made in all cases in which the complaints were found to be just.

Another source of complaint that finds voice quite frequently is that too many of the preparations are dependent upon each other; that is to say, that in order to make one preparation, two, three or more other preparations have to be made before the one desired can be compounded. This defect is true only in a restricted sense, and does not entail the inconvenience that is generally implied in the complaints. As already pointed out in the preface to the original edition (p. vii) only a few preparations of the "Formulary" are so concerned, and these are inexpensive, and are easily kept in a well assorted stock. It is, therefore, suggested that the following preparations be kept ready prepared:

Aromatic Elixir (U. S. P.).
Aromatic Elixir of Liquorice (F. 77).
Compound Elixir of Taraxacum (F. 111).
Compound Spirit of Orange (U. S. P.).
Compound Spirit of Cardamon (F. 347).
Compound Tincture of Cudbear (F. 419).
Solution of Cochineal (F. 216).

Syrup of Coffee (F. 367).

Tincture of Citro-Chloride of Iron (F. 407).

Tincture of Cudbear (F. 418).

With these preparations—which cannot be made at short notice—and such chemicals and supplies as may be expected in every well-appointed pharmacy, most of the preparations contemplated in the complaints may be conveniently and expeditiously made; while in the case of formulas in which other preparations of the "Formulary" are concerned, their preparation can usually become part of the process. To facilitate this the number as well as the name of the preparation so directed is given in the formulas, while official preparations are indicated by the letters "U. S. P." following their titles.

The demand for additional formulas has been carefully considered by the Committee. This demand, unfortunately, was in most cases for working formulas for preparations that have come into current use under fanciful trade-names, and for which no formulas, other than obscure indications of composition borne on the labels, are known to pharmacy. The Committee did not consider it within the scope of their duties to devise and construct formulas for such preparations, the more particularly since their composition is only imperfectly given, and because the demand for them seems to be dependent upon the skill and industry with which they are brought to the attention of the medical profession, rather than upon any intrinsic superiority that they possess over other medicinal agents. On the other hand, preparations for which working formulas were suggested to the Committee, were uniformly subjected to critical experiment, and their formulas embodied in the revised "Formulary."

The Committee has seen fit to embody in this revised edition the formulas of such preparations as were dropped at the last revision of the U. S. Pharmacopœia, since some of these may still continue to be prescribed in various parts of the country; on the other hand, the formulas for all those preparations have been omitted, which appeared in the first edition of the "Formulary," but were subsequently introduced into the Pharmacopœia of 1890.

In conformity with instruction the different denominations of weights and measures are expressed in the terms of the Metric System in this revised "Formulary," and they have been adjusted, when-

ever practicable, so as to make one thousand grammes or cubic centimeters of the finished product. This is perhaps the most radical change that has been effected, but one that places the "Formulary" abreast of the times, and its text in harmony with that of the U. S. Pharmacopœia of 1890.

January, 1896.

C. LEWIS DIEHL,
Chairman of the Com. on Nat. Formulary of the A. Ph. A.

A. B. STEVENS,
Chairman of the Sub-Committee on Corrections.

C. T. P. FENNEL,
Chairman of the Sub-Committee on Eliminations.

CHAS. CASPARI, JR.,
Chairman of the Sub-Committee on Additions.

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C. S. N. Hallberg, Chicago. C. T. P. Fennel, Cincinnati.
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Tennessee.—James O. Burge, Nashville.
Texas.—E. M. Wells, Fort Worth.
Washington.—Henry E. Holmes, Seattle.
West Virginia.—Edwin L. Boggs, Charleston.

PRELIMINARY NOTICES.

In this "Formulary" quantities are given both in the Metric and the Apothecaries' System of Weights and Measures. Precedence being given to the former, the latter should be regarded as the alternative quantities.

These alternative quantities are proportional, but not identical, and therefore not interchangeable with the Metric quantities given.

Metric quantities are expressed only in grammes (*Gm.*) and cubic centimeters (*Cc.*), and their decimal fractions.

Apothecaries' quantities are expressed in troy ounces and grains, and in fluidounces, fluidrachms and minims.

In some formulas, comparatively few, in which all the quantities taken, as well as the final product, are by weight, these quantities are simply expressed as "parts," meaning *parts by weight.*

When liquids are to be mixed in certain definite proportions, by measure, but not in definite quantities, as in the preparation of menstrua, for instance, these proportions are expressed as "volumes," meaning *parts by volume.*

The serial numbering of the formulas has been omitted in this edition of the "Formulary," so as to avoid confusion arising from the transposition of numbers, necessitated by additions or elisions of formulas in effecting the revisions.

COMPARISON OF WEIGHTS AND MEASURES ADOPTED IN THIS "FORMULARY."

1000 Gm. = 15432.4 grains, or 32 troy ounces, 72.4 grains.
1 Gm. = 15.432 grains,
1000 Cc. = 16230.6 minims, or 33 fluidounces 390.6 minims of water
1 Cc. = 16.23 minims, at 4° C.

1 troy ounce = 480 grains, or 1 fluidounce 24.8 minims of water at 4° C.
1 fluidounce = 456.4 grains, or 480 minims.
1 grain = 1.0517 minims, or 0.0648 Gm. (or Cc.).
1 minim = 0.9508 grains, or 0.0616 Gm. (or Cc.).

If 1000 Gm. contain 1 Gm., then 32 troy ounces contain 15.360 grains.
If 1000 Gm. contain 1 Cc., then 32 troy ounces contain 16.154 minims.
If 1000 Cc. contain 1 Gm., then 32 fluidounces contain 14.600 grains.
If 1000 Cc. contain 1 Cc., then 32 fluidounces contain 15.359 minims.

ABBREVIATIONS.

Apothecaries' . . . . . Apothecaries' Weights and Measures.
B. P. . . . . British Pharmacopœia.
Cc. . . . . Cubic Centimeter.
Codex . . . . . French Pharmacopœia.
Gm. . . . . Gramme.
G. P. . . . . German Pharmacopœia.
Metric . . . . . Metric Weights and Measures.
N. F. or "Formulary" . . . . National Formulary.
N. F. "Appendix" . . . . . National Formulary Appendix.
Sp. gr. . . . . Specific Gravity.
U. S. P. . . . . U. S. Pharmacopœia VIII (1900).

NATIONAL FORMULARY

OF

UNOFFICIAL PREPARATIONS.

ACETUM AROMATICUM.

Aromatic Vinegar

	Metric.	*Apothecaries'.*
Oil of Lavender	0.5 Cc.	8 minims.
Oil of Rosemary	0.5 Cc.	8 minims.
Oil of Juniper	0.5 Cc.	8 minims.
Oil of Peppermint	0.5 Cc.	8 minims.
Oil of Cinnamon	0.5 Cc.	8 minims.
Oil of Lemon	1 Cc.	16 minims.
Oil of Cloves	1 Cc.	16 minims.
Alcohol	175 Cc.	6 fluidounces.
Acetic Acid (U. S. P.)	175 Cc.	6 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Oils in the Alcohol, add the Acetic Acid, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces). Warm the turbid mixture, during several hours, at a temperature not exceeding 70° C. (158° F.), taking care that it shall not suffer loss by evaporation. Then set it aside for a few days, occasionally agitating, and filter.

ACIDUM CARBOLICUM IODATUM.

Iodized Carbolic Acid.

Phenol Iodatum. Iodized Phenol.

Iodine, reduced to powder	20 parts.
Carbolic Acid (Phenol, U. S. P.)	60 parts.
Glycerin	20 parts.

Introduce the Iodine into a flask, add the Carbolic Acid, previously

melted, then the Glycerin, and digest the mixture at a gentle heat, frequently agitating, until the Iodine is dissolved.

Keep the product in glass-stoppered vials, in a dark place.

ACIDUM CITRICUM SACCHARATUM.

Saccharated Citric Acid.

Citric Acid (U. S. P.), in very fine powder	625 parts.
Sugar, in very fine powder	375 parts

Triturate the powders together until intimately mixed, and preserve the product in well-stoppered bottles.

Note.—This Saccharate, when dissolved in water with an equal weight of Saccharated Sodium Bicarbonate (N. F. p. 142), will form a neutral solution, and it is introduced into the "Formulary" for the convenient preparation of Effervescent Powders (N. F. p. 129).

The Saccharate contains 62.5 per cent. of Crystallized Citric Acid.

ACIDUM HYPOPHOSPHOROSUM.

(U. S. P. = 30 per cent.)

Hypophosphorous Acid.

Potassium Hypophosphite (U. S. P.)	483 parts.
Tartaric Acid	682 parts.
Diluted Alcohol	
Distilled Water, each, enough	
To make	1000 parts.

Dissolve the Potassium Hypophosphite in 500 parts of Distilled Water, previously warmed, and the Tartaric Acid in 1000 parts of Diluted Alcohol. Mix the solutions in a flask of sufficient capacity to permit agitation, cork and shake well, and set the flask in a bath of ice water for 12 hours. Then carefully pour the mixture into a funnel the neck of which has been closed with a pledget of cotton, and, when all the liquid has drained off, rinse the flask and wash the crystalline precipitate in the funnel with small portions of cold Diluted Alcohol until the washings no longer respond to the tests for Hypophosphorous Acid (black precipitate by Silver Nitrate T. S., or white precipitate by Mercuric Chloride T. S.). Mix the original filtrate and the washings, and evaporate the whole on a water-bath at a temperature not exceeding 60° C. (140° F.) until all Alcohol has been dissipated. Allow the liquid to cool and add sufficient Distilled Water to bring the weight up to 1000 parts. Preserve the product in well-stoppered bottles.

Note.—This formula produces the *Hypophosphorous Acid* (30 per cent.) now official in the U. S. P., and is here given because it may occasionally be convenient or necessary to make it. If *Diluted Hypophosphorous Acid* (*U. S. P.*) is required, 1 part of this Acid is diluted with 2 parts of Distilled Water.

ACIDUM METAPHOSPHORICUM DILUTUM.

Diluted Metaphosphoric Acid.

Acidum Phosphoricum Glaciale Dilutum. Diluted Glacial Phosphoric Acid.

	Metric.	*Apothecaries'*
Glacial Phosphoric Acid	100 Gm.	{ 3 troy ounces 20 grains.
Distilled Water, enough to make	1000 Cc.	32 fluidounces.

Dissolve the Acid in the Water, without heat.

This preparation should be kept in a cool and dark place, and should not be prepared in larger quantity than may be consumed within a few months.

Note.—The resulting product contains about 10 per cent. of metaphosphoric acid, provided the glacial acid was free from impurities. That which is sold in form of glassy lumps is usually of sufficient purity. The variety in form of round sticks is more or less impure, containing generally more than 15 per cent. of sodium phosphate. If this variety is alone available, a proportionately larger quantity must be taken, to be determined, if time permits, by an assay of the free acid present. If no special accuracy is required, about 115 Gm. of this variety of the acid may be reckoned to be equivalent to the quantity directed in the above-given formula.

Whenever Soluble Ferric Pyrophosphate (U. S. P.) forms one of the ingredients of a mixture containing Diluted Phosphoric Acid, the official tribasic acid is unsuitable, as it produces with the salt a gelatinous precipitate. If a clear mixture is required, the above preparation is to be used in place of the official. The same may be done when Soluble Ferric Phosphate (U. S. P.) is prescribed, though the precipitate caused by the official acid in this case is not as bulky, and under certain conditions may not form at all.

ACIDUM TARTARICUM SACCHARATUM.

Saccharated Tartaric Acid.

Tartaric Acid (U. S. P.), in very fine powder	675 parts.
Sugar, in very fine powder	325 parts.

Triturate the powders together until intimately mixed, and preserve the product in well-stoppered bottles.

Note.—This Saccharate, when dissolved in water with an equal weight of Saccharated Sodium Bicarbonate (N. F. p. 142), will form a neutral solution, and it is introduced into the "Formulary" for the convenient preparation of Effervescent powders (N. F. p. 129).

This Saccharate contains 67.5 per cent. of Tartaric Acid.

AQUA SEDATIVA.

Sedative Water.

Lotio Ammoniacalis Camphorata (Codex). **Eau Sedative de Raspail.**

	Metric	*Apothecaries'.*
Ammonia Water (U. S. P.)	125 Cc.	4 fluidounces.
Spirit of Camphor (U. S. P.)	12 Cc.	3 fluidrachms.
Sodium Chloride	65 Gm.	2 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Chloride in about 500 Cc. (or 16 fluidounces) of Water, add the Water of Ammonia and Spirit of Camphor, and finally enough Water to make 1000 Cc. (or 32 fluidounces).

Shake the liquid when it is to be dispensed.

Average dose: 8 Cc. (2 fluidrachms).

BALSAMUM TRAUMATICUM.

Traumatic Balsam.

Turlington's Balsam. Friar's Balsam.

	Metric.	*Apothecaries'.*
Benzoin, in coarse powder	100 Gm.	3 troy ounces.
Storax	32 Gm.	1 troy ounce.
Balsam of Tolu	32 Gm.	1 troy ounce.
Balsam of Peru	16 Gm.	½ troy ounce.
Aloes, in coarse powder	8 Gm.	120 grains.
Myrrh, in coarse powder	8 Gm.	120 grains.
Angelica Root, in moderately coarse powder	4 Gm.	60 grains.
Alcohol	1000 Cc.	32 fluidounces.

Macerate the substances with the Alcohol during ten days, frequently agitating; then filter.

Average dose: 2 Cc. (30 minims).

Note.—The official *Tinctura Benzoini Composita* is a simplified preparation intended to replace the above compound.

BISMUTHI OXIDUM HYDRATUM.

Hydrated Oxide of Bismuth.

Bismuth Subnitrate	300 parts.
Nitric Acid (U. S. P.)	500 parts.
Ammonia Water (U. S. P.)	600 parts.
Sodium Bicarbonate	50 parts.
Distilled Water, a sufficient quantity.	

Mix the Bismuth Subnitrate with 200 parts of Distilled Water in a

quart flask, add 450 parts of Nitric Acid, and promote the solution of the salt by agitation, and, if necessary, by a gentle heat. Pour the solution into 6000 parts of Distilled Water previously acidulated with 50 parts of Nitric Acid, and filter the liquid through absorbent cotton. Mix the Ammonia Water with 12,000 parts of Distilled Water in a glazed vessel of double that capacity, and pour into it, slowly and with constant stirring, the bismuth solution. Let the mixture stand during four hours so that the precipitate may subside, then pour off the supernatant liquid, and wash the precipitate four times more by decantation with Distilled Water, the Sodium Bicarbonate being dissolved in the last wash-water. Pour the precipitate upon a wetted muslin strainer, and wash it with Distilled Water, until the washings run off tasteless. Transfer the strainer to a warm place, so that the precipitate may dry. Then rub the latter to powder, and keep it in well-stoppered bottles.

Note.—Hydrated Oxide of Bismuth is sometimes demanded in the form of a creamy mixture with water, under the name of *Cremor Bismuthi* or *Cream of Bismuth*. This may be prepared by triturating 20 parts of the Oxide with 80 parts of Water.

BOROGLYCERINUM.

Boroglycerin.

Glyceryl Borate. Boroglyceride.

Boric Acid, in powder	620 parts.
Glycerin	920 parts.

Heat the Glycerin in a tared porcelain capsule to a temperature not exceeding 150° C. (302° F.), and add the Boric Acid in portions, constantly stirring. When all is added and dissolved, continue the heat at the same temperature, frequently stirring, and breaking up the film which forms on the surface. When the mixture has become reduced to a weight of 1000 parts, pour it out on a flat surface previously coated with a very small quantity of petrolatum, let it cool, cut it into pieces and transfer them immediately to bottles and jars, which should be well-stoppered.

Note.—The official Glycerite of Boroglycerin may be made from this by adding an equal weight of Glycerin to the finished Boroglycerin while it is still warm.

CAFFEINÆ SODIO-BENZOAS.

Caffeine Sodio-Benzoate.

Caffeine	50 parts.
Sodium Benzoate	50 parts.
Alcohol, a sufficient quantity.	

Triturate the Caffeine with the Sodium Benzoate and a sufficient

quantity of Alcohol to a smooth paste, and dry this by exposure in a moderately warm place. Rub the dry mass to powder, and keep it in well-stoppered bottles.

Average dose: 0.2 Gm. (3 grains).

Note.—The product contains 50 per cent. of Caffeine, and is soluble in 2 parts of water.

CAFFEINÆ SODIO-SALICYLAS.

Caffeine Sodio-Salicylate.

Caffeine	50 parts.
Sodium Salicylate	50 parts.
Alcohol, a sufficient quantity.	

Triturate the Caffeine with the Sodium Salicylate and a sufficient quantity of Alcohol to a smooth paste, and dry this by exposure in a moderately warm place. Rub the dry mass to powder, and keep it in well stoppered bottles.

Average dose: 0.2 Gm. (3 grains).

Note.—The product contains 50 per cent. of Caffeine, and is soluble in 2 parts of water.

CAMPHO-MENTHOL.

Camphor and Menthol.

Camphor	50 parts.
Menthol	50 parts.

Reduce the camphor and menthol separately to powder; mix them, and triturate the mixture until it is completely liquefied.

CERATUM CAMPHORÆ COMPOSITUM.

Compound Camphor Cerate.

Ceratum Camphoratum. Camphor Ice.

	Metric.	*Apothecaries'.*
Camphor, in coarse powder	107 Gm.	3½ troy ounces.
White Wax	150 Gm.	4¾ troy ounces.
Castor Oil	250 Gm.	8 troy ounces.
Spermaceti	480 Gm.	15½ troy ounces.
Carbolic Acid, liquefied by warming	2 Gm.	30 grains.
Oil of Bitter Almond	1 Gm.	15 grains.
Benzoic Acid	10 Gm.	150 grains.

Melt the White Wax and Spermaceti on a water-bath, add the Castor Oil, and afterwards the Camphor, and continue heating and stirring until the Camphor is dissolved. Then withdraw the heat, cover the vessel, and when the mixture has somewhat cooled, add the remaining

ingredients, and thoroughly incorporate them by stirring. Lastly, pour the Cerate into suitable moulds.

CHLORAL CAMPHORATUM.

Camphorated Chloral.

Chloral et Camphora. Chloral and Camphor.

Hydrated Chloral	50 parts.
Camphor	50 parts.

Reduce the Camphor and Hydrated Chloral separately to powder; mix them, and triturate the mixture until it is completely liquefied.

COLLODIUM IODATUM.

Iodized Collodion.

Iodine, reduced to powder	5 parts.
Flexible Collodion (U. S. P.)	95 parts.

Introduce the Iodine into a tared bottle, add the Flexible Collodion and agitate until the Iodine is dissolved.

COLLODIUM IODOFORMATUM.

Iodoform Collodion.

Iodoform, in fine powder	5 parts.
Flexible Collodion (U. S. P.)	95 parts.

Weigh the Flexible Collodion into a bottle, add the Iodoform and agitate until it is dissolved.

COLLODIUM TIGLII.

Croton Oil Collodion.

Croton Oil	10 parts.
Flexible Collodion (U. S. P.)	90 parts.

Mix them.

COLLODIUM SALICYLATUM COMPOSITUM.

Compound Salicylated Collodion.

Corn Collodion.

Salicylic Acid	11 parts.
Extract of Indian Hemp	2 parts.
Alcohol	10 parts.
Flexible Collodion (U. S. P.), a sufficient quantity	
To make	100 parts.

Dissolve the Extract of Indian Hemp in the Alcohol, and the Sal-

icylic Acid in about 50 parts of Flexible Collodion previously weighed into a tared bottle. Then add the former solution to the latter, and finally add enough Flexible Collodion to make the product weigh 100 parts.

CORDIALE RUBI FRUCTUS.

Blackberry Cordial.

	Metric.	*Apothecaries'.*
Cinnamon, in No. 40 powder	20 Gm.	300 grains.
Cloves, in No. 40 powder	5 Gm.	75 grains.
Nutmeg, in No. 40 powder	5 Gm.	75 grains.
Purified Talc	8 Gm.	120 grains.
Blackberry Juice, recently expressed	375 Cc.	12 fluidounces.
Syrup (U. S. P.)	375 Cc.	12 fluidounces.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Percolate the powdered spices with Diluted Alcohol to obtain 250 Cc. (or 8 fluidounces) of tincture; add to this the Blackberry Juice and the Purified Talc, shake the mixture occasionally for twenty-four hours, and filter. Wash the filter with sufficient Diluted Alcohol to obtain 625 Cc. (or 20 fluidounces) of filtrate; add the filtrate to the Syrup, and mix well.

DECOCTUM ALOES COMPOSITUM.

Compound Decoction of Aloes.

	Metric.	*Apothecaries'.*
Extract of Aloes (U. S. P.)	10 Gm.	145 grains.
Myrrh	7.5 Gm.	115 grains.
Saffron	7.5 Gm.	115 grains.
Potassium Carbonate	5 Gm	75 grains.
Extract of Glycyrrhiza, in powder	35 Gm.	512 grains.
Compound Tincture of Cardamom (U. S. P.)	250 Cc.	8 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the Myrrh and Extract of Aloes to a coarse powder, mix this with the Potassium Carbonate and Extract of Liquorice in a suitable covered vessel, and pour on 600 Cc. (or 19 fluidounces) of Water; boil for five minutes, and add the Saffron. When cool, add the Compound Tincture of Cardamom, and allow the mixture to macerate for two hours; then filter through flannel, and add enough Water to make the product measure 1000 Cc. (or 32 fluidounces).

This preparation should be freshly made when required.

ELIXIRIA.

Elixirs.

The Elixirs for which formulas are given in this "Formulary" should, without exception, be perfectly clear preparations when dispensed. In most formulas ample provision is made for securing preparations that will be, and will remain, satisfactory in this respect. If, however, for any reason an Elixir shall become turbid on keeping, it must be filtered through paper, or otherwise clarified. To secure a brilliantly clear filtrate, it is recommended to shake the turbid Elixir with a little Purified Talc (U. S. P.) before filtration—10 to 15 Gm. (or 3 to 4 drachms) sufficing for 1000 Cc. (or 32 fluidounces).

While it is manifestly obligatory to use for all medicinal preparations only material of accepted purity and quality, it is worth remembering that no class of preparations calls for greater care in the selection than does that of Elixirs, and that this is particularly true with regard to the flavoring ingredients (the volatile oils), which must be absolutely fresh and of reliable quality if a satisfactory product is the desideratum.

Elixirs should not be exposed to extremes of temperature; they should be kept as near as practicable at the ordinary room temperature.

ELIXIR ACIDI SALICYLICI.

Elixir of Salicylic Acid.

	Metric.	*Apothecaries'.*
Salicylic Acid	85 Gm.	2⅔ troy ounces.
Potassium Citrate	125 Gm.	4 troy ounces.
Glycerin	500 Cc.	16 fluidounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Potassium Citrate in the Glycerin with the aid of a gentle heat. Add the Salicylic Acid, and continue the heat until it is dissolved. Then add enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces).

This Elixir should be freshly made when needed.

4 Cc. (1 fluidrachm) contain 0.33 Gm. (5 grains) of Salicylic Acid.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR AMMONII BROMIDI.

Elixir of Ammonium Bromide.

	Metric.	*Apothecaries'.*
Ammonium Bromide	85 Gm.	2⅔ troy ounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ammonium Bromide in sufficient Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.33 Gm. (5 grains) of Ammonium Bromide.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR AMMONII VALERIANATIS.

Elixir of Ammonium Valerianate.

	Metric.	*Apothecaries'.*
Ammonium Valerianate	35 Gm.	512 grains.
Chloroform	1.3 Cc.	20 minims.
Tincture of Vanilla (U. S. P.)	16 Cc.	½ fluidounce.
Compound Tincture of Cudbear (N. F.) .	16 Cc.	½ fluidounce.
Ammonia Water (U. S. P.), Aromatic Elixir (U. S. P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ammonium Valerianate in about 65 Cc. (or 2 fluidounces) of Aromatic Elixir, in a graduated vessel, and add enough Ammonia Water, in drops, until a faint excess of it is perceptible in the liquid. Then add the Chloroform, Tincture of Vanilla and Compound Tincture of Cudbear, and finally, enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Ammonium Valerianate.

Average dose: 4 Cc. (1 fluidrachm).

Note.—Should the odor of valerianic acid become perceptible after the Elixir has been kept for some time, it may be overcome by slightly supersaturating with Ammonia Water.

ELIXIR AMMONII VALERIANATIS ET QUININÆ.

Elixir of Ammonium Valerianate and Quinine.

	Metric.	*Apothecaries'.*
Quinine Hydrochloride	4.25 Gm.	64 grains.
Elixir of Ammonium Valerianate (N. F).	1000 Cc.	32 fluidounces.

Dissolve the Quinine Hydrochloride in the Elixir and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.0162 Gm. (¼ grain) of Quinine Hydrochloride and 0.13 Gm. (2 grains) of Ammonium Valerianate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR ANISI.

Elixir of Anise.

Aniseed Cordial.

	Metric.	*Apothecaries'.*
Anethol	3.5 Cc.	50 minims.
Oil of Fennel	0.5 Cc.	10 minims.
Spirit of Bitter Almond (U. S. P.)	12 Cc.	3 fluidrachms.
Alcohol	240 Cc.	7½ fluidounces.
Syrup (U. S. P.)	625 Cc.	20 fluidounces.
Water	125 Cc.	4 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.

Mix the Anethol, the Oil, and the Spirit of Bitter Almond with the Deodorized Alcohol, add the Syrup and Water, and set the mixture aside for twelve hours. Then mix it intimately with the Purified Talc, and filter it through a wetted filter, returning the first portions of the filtrate until it runs through clear.

Average dose: for Infants, 1 Cc. (15 minims).

Note.—This Elixir is liable to become cloudy, from separation of essential oils, when it is exposed to a temperature lower than that at which it has been filtered. In general, it is recommended that it be cooled to, and filtered at a temperature of about 15° C. (59° F.). In the northern sections of this country, or in winter time, it should be cooled to a proportionately lower temperature, previous to filtration.

Anethol is the stearopten of oil of anise, and possesses a finer and purer aroma and taste than any commercial variety of oil of anise. If it cannot be readily obtained, the so-called Saxon oil of anise may be substituted for it. Oil of star-anise, which is usually supplied by dealers when "oil of anise" without specification is ordered, does not answer well for this purpose. The oil of fennel should be that from the seed ("sweet"), and not that from the chaff.

ELIXIR APII GRAVEOLENTIS COMPOSITUM.

Compound Elixir of Celery.

	Metric.	*Apothecaries'.*
Fluidextract of Celery Seed (N. F.)	62 Cc.	2 fluidounces.
Fluidextract of Coca (U. S. P.)	62 Cc.	2 fluidounces.
Fluidextract of Kola (N. F.)	62 Cc.	2 fluidounces.
Fluidextract of Viburnum Prunifolium (U.S.P.).	62 Cc.	2 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Alcohol with 250 Cc. (or 8 fluidounces) of Aromatic Elixir. To this add the Fluidextract of Celery Seed in several portions, shaking after each addition, and afterwards the other Fluidextracts. Finally add enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), allow the mixture to stand twenty-four hours, and filter.

Note.—If this preparation is prescribed or quoted under its Latin title, it is recommended that the full title be given, so that the word "Apii" may not be mistaken for "Opii."

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR BISMUTHI.

Elixir of Bismuth.

	Metric.	*Apothecaries'.*
Glycerite of Bismuth (N. F.)	125 Cc.	4 fluidounces.
Glycerin	125 Cc.	4 fluidounces.
Water	250 Cc.	8 fluidounces.
Aromatic Elixir (U. S. P.)	500 Cc.	16 fluidounces.

Mix them in the order given and filter, if necessary.

4 Cc. (1 fluidrachm) represent 0.13 Gm. (2 grains) Bismuth and Sodium Tartrate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR BUCHU.

Elixir of Buchu.

	Metric.	*Apothecaries'.*
Fluidextract of Buchu (U. S. P.)	125 Cc.	4 fluidounces.
Alcohol	62 Cc.	2 fluidounces.
Syrup (U. S. P.)	62 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.)	751 Cc.	24 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
To make	1000 Cc.	32 fluidounces.

Mix the Fluidextract of Buchu with the Alcohol, then add the Aromatic Elixir, the Syrup and the Purified Talc. Shake well, and if time permits, occasionally during twelve hours; then filter, returning the first portions of filtrate until it passes clear.

4 Cc. (1 fluidrachm) represent about 0.5 Gm. (7½ grains) of Buchu.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR BUCHU COMPOSITUM.

Compound Elixir of Buchu.

	Metric.	*Apothecaries'.*
Compound Fluidextract of Buchu (N. F.)	250 Cc.	8 fluidounces.
Alcohol	62 Cc.	2 fluidounces.
Syrup (U. S. P.)	62 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.)	626 Cc.	20 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
To make	1000 Cc.	32 fluidounces.

Mix the Compound Fluidextract of Buchu with the Alcohol, then add the Aromatic Elixir, the Syrup and the Purified Talc. Shake well, and if time permits, occasionally during twelve hours; then filter, returning the first portions of filtrate until it passes clear.

4 Cc. (1 fluidrachm) represent 1 Cc. (15 minims) of Compound Fluidextract of Buchu (N. F.).

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR BUCHU ET POTASSII ACETATIS.

Elixir of Buchu and Potassium Acetate.

	Metric.	*Apothecaries'.*
Potassium Acetate	85 Gm.	2⅔ troy ounces.
Elixir of Buchu (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Potassium Acetate in sufficient Elixir of Buchu to make 1000 Cc. (or 32 fluidounces) and filter, if necessary.

4 Cc. (1 fluidrachm) represent 0.34 Gm. (5 grains) of Potassium Acetate and about 0.5 Gm. (7½ grains) of Buchu.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR CAFFEINÆ.

Elixir of Caffeine.

	Metric.	*Apothecaries'.*
Caffeine	17.5 Gm.	256 grains.
Diluted Hydrobromic Acid (U. S. P.) . . .	4 Cc.	60 grains.
Syrup of Coffee (N. F.)	250 Cc.	8 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Rub the Caffeine, in a mortar, with the Diluted Hydrobromic Acid and about 125 Cc. (or 4 fluidounces) of Aromatic Elixir, until solution is effected. Then add the Syrup of Coffee, and lastly, enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Caffeine.

Average dose: 4 Cc (1 fluidrachm).

ELIXIR CALCII BROMIDI.

Elixir of Calcium Bromide.

	Metric.	*Apothecaries'.*
Calcium Bromide	85 Gm.	2⅔ troy ounces.
Diluted Hydrobromic Acid (U. S. P.)	4 Cc.	1 fluidrachm.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Calcium Bromide in 500 Cc. (or 16 fluidounces) of the Aromatic Elixir, then add the Diluted Hydrobromic Acid and sufficient Aromatic Elixir to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.34 Gm. (5 grains) of Calcium Bromide.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR CALCII HYPOPHOSPHITIS.

Elixir of Calcium Hypophosphite.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	35 Gm.	512 grains.
Hypophosphorous Acid (U. S. P.)	4 Cc.	1 fluidrachm.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Calcium Hypophosphite in 750 Cc. (or 24 fluidounces) of Aromatic Elixir, add the Hypophosphorous Acid, and sufficient Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc (1 fluidrachm) contain 0.13 Gm. (2 grains) of Calcium Hypophosphite.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CALCII LACTOPHOSPHATIS.

Elixir of Calcium Lactophosphate.

	Metric.	*Apothecaries'.*
Calcium Lactate	17.5 Gm.	256 grains.
Phosphoric Acid (U. S. P., 85%)	8 Cc.	2 fluidrachms.
Water	60 Cc.	2 fluidounces.
Syrup (U. S. P.)	60 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Calcium Lactate with the Phosphoric Acid, the Water, and the Syrup, until the salt is dissolved. Then add enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) represent 0.065 Gm. (1 grain) of Calcium Lactate, or about 0.1 Gm. (1½ grains) of so-called Calcium Lactophosphate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CATHARTICUM COMPOSITUM.

Compound Cathartic Elixir.

	Metric.	*Apothecaries'.*
Fluidextract of Frangula (U. S. P.)	125 Cc.	4 fluidounces.
Fluidextract of Senna (U. S. P.)	100 Cc.	3 fluidounces.
Fluidextract of Rhubarb (U. S. P.)	62 Cc.	2 fluidounces.
Spirit of Peppermint (U. S. P.)	14 Cc.	3½ fluidrachms.
Solution of Potassium Hydroxide (U. S. P.)	4.5 Cc.	1 fluidrachm.
Saccharin	4.5 Gm.	60 grains.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Saccharin in about 600 Cc. (or 20 fluidounces) of the Aromatic Elixir previously mixed with the Solution of Potassium Hydroxide; then add the Fluidextracts, the Spirit of Peppermint, and sufficient Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Mix well, allow to stand twenty-four hours, and filter.

Average dose: Aperient, 4 Cc. (1 fluidrachm); Cathartic, 12 Cc. (3 fluidrachms).

ELIXIR CHLOROFORMI COMPOSITUM.

Compound Elixir of Chloroform.

	Metric.	*Apothecaries'.*
Chloroform	190 Cc.	6 fluidounces.
Tincture of Opium (U. S. P.)	190 Cc.	6 fluidounces.
Spirit of Camphor (U. S. P.)	190 Cc.	6 fluidounces.
Aromatic Spirit of Ammonia (U. S. P.)	190 Cc.	6 fluidounces.
Oil of Cinnamon	5 Cc.	75 minims.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Chloroform with about 225 Cc. (or 7 fluidounces) of Alcohol; add the Tincture, the Spirits and the Oil, followed by sufficient Alcohol to make 1000 Cc. (or 32 fluidounces), and mix well. Allow the mixture to stand several hours; then filter in a well-covered funnel.

4 Cc. (1 fluidrachm) represent about 0.065 Gm. (1 grain) of Opium and about 0.67 Cc. (11 minims) of Chloroform.

Average dose: 2 Cc. (½ fluidrachm).

ELIXIR CINCHONÆ.

(Elixir of Cinchona from "Alkaloids.")

Elixir of Cinchona. Elixir Calisaya.

Compound Elixir of Quinine.

	Metric.	*Apothecaries'*
Quinine Sulphate	2 Gm.	30 grains.
Cinchonidine Sulphate	1 Gm.	15 grains.
Cinchonine Sulphate	1 Gm.	15 grains.
Compound Tincture of Cudbear (N. F.)	50 Cc.	1½ fluidounce.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the alkaloid salts in 900 Cc. (or 30 fluidounces) of Aromatic Elixir; add the Compound Tincture of Cudbear and sufficient Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), and triturate the Purified Talc with the mixture. Allow the mixture to stand several hours, if convenient, occasionally shaking; then filter through paper, returning the first portions until the filtrate passes perfectly clear.

30 Cc. (1 fluidounce) contain about 0.065 Gm. (1 grain) of Quinine Sulphate and 0.032 Gm. (½ grain) each of the Cinchonidine and Cinchonine Sulphates.

Average dose: 8 Cc. (2 fluidrachms).

Note.—This formula replaces that heretofore given for "Elixir of Cinchona," which was directed to be made from Tincture of Cinchona, and is believed to produce a practical equivalent of the older preparation, with the advantage of giving no reaction with salts of iron. It also replaces the "Detannated Elixir of Cinchona" and the "Compound Elixir of Quinine," both of which have been dropped from the present revision.

ELIXIR CINCHONÆ ET HYPOPHOSPHITUM.

Elixir of Cinchona and Hypophosphites.
Elixir of Calisaya and Hypophosphites.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	17.5 Gm.	256 grains.
Sodium Hypophosphite	17.5 Gm.	256 grains.
Hypophosphorous Acid (U. S. P.)	4. Cc.	1 fluidrachm.
Water	125. Cc.	4 fluidounces.
Elixir of Cinchona (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Hypophosphites in the water, add the Hypophosphor-

ous acid, and sufficient Elixir of Cinchona to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain 0.065 (1 grain) each of the Hypophosphites of Calcium and Sodium.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CINCHONÆ ET FERRI.

Elixir of Cinchona and Iron.

Elixir of Calisaya and Iron. Ferrated Elixir of Calisaya.

	Metric.	*Apothecaries'.*
Soluble Ferric Phosphate (U. S. P.)	35 Gm.	512 grains.
Water, boiling	60 Cc.	2 fluidounces.
Elixir of Cinchona (N.F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Soluble Ferric Phosphate in the boiling water, add enough Elixir of Cinchona to make 1000 Cc. (or 32 fluidounces) when cool, and filter.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Soluble Ferric Phosphate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CINCHONÆ, FERRI, BISMUTHI ET STRYCHNINÆ.

Elixir of Cinchona, Iron, Bismuth and Strychnine.

Elixir of Calisaya, Iron, Bismuth and Strychnine.

	Metric.	*Apothecaries'.*
Strychnine Sulphate	0.175 Gm.	$2\frac{1}{2}$ grains.
Water, hot	10 Cc.	$2\frac{1}{2}$ fluidrachms.
Elixir of Cinchona, Iron, and Bismuth (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Strychnine Sulphate in hot Water, and add sufficient of the Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.0006 Gm. ($\frac{1}{100}$ grain) of Strychnine Sulphate, about 0.065 Gm. (1 grain) of Bismuth and Sodium Tartrate and nearly 0.13 Gm (2 grains) of Soluble Ferric Phosphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR CINCHONÆ, FERRI ET BISMUTHI.

Elixir of Cinchona, Iron and Bismuth.
Elixir of Calisaya, Iron and Bismuth.

	Metric.	*Apothecaries'.*
Glycerite of Bismuth (N. F.)	65 Cc.	2 fluidounces.
Water	65 Cc.	2 fluidounces.
Elixir of Cinchona and Iron (N. F.)	870 Cc.	28 fluidounces.
To make	1000 Cc.	32 fluidounces.

Dilute the Glycerite with the Water, add the Elixir, and mix thoroughly. Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.065 Gm. of Bismuth and Sodium Tartrate and 0.12 Gm. (1¾ grain) of Soluble Ferric Phosphate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CINCHONÆ, FERRI, ET CALCII LACTOPHOSPHATIS.

Elixir of Cinchona, Iron and Calcium Lactophosphate.
Elixir of Calisaya, Iron and Lactophosphate of Lime.

	Metric.	*Apothecaries'.*
Calcium Lactate	8.5 Gm.	128 grains.
Phosphoric Acid (U. S. P., 85%)	4 Cc.	60 minims.
Ammonia Water (U. S. P.)	32 Cc.	1 fluidounce.
Citric Acid	16 Gm.	235 grains.
Elixir of Cinchona and Iron (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Calcium Lactate in 450 Cc. (or 15 fluidounces) of the Elixir, with the aid of the Phosphoric Acid Then add the Citric Acid, and when this is dissolved, the Ammonia Water. Finally add enough of the Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1fluidrachm) contain 0.032 Gm. (½ grain) of Calcium Lactate, or about 0.048 Gm. (¾ grain) of so-called Calcium Lactophosphate, and nearly 0.13 Gm. (2 grains) of Soluble Ferric Phosphate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CINCHONÆ, FERRI ET PEPSINI.

Elixir of Cinchona, Iron and Pepsin.
Elixir of Calisaya, Iron and Pepsin.

	Metric.	*Apothecaries'.*
Glycerite of Pepsin (N. F.)	200 Cc.	6⅝ fluidounces.
Elixir of Cinchona and Iron (N. F.)	800 Cc.	25⅜ fluidounces.
To make	1000 Cc.	32 fluidounces.

Mix, and allow the mixture to stand a few days, if convenient; then filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Pepsin and about 0.1 Gm. (1½ grains) of Soluble Ferric Phosphate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR CINCHONÆ, FERRI ET STRYCHNINÆ.

Elixir of Cinchona, Iron and Strychnine.

Elixir of Calisaya, Iron and Strychnine.

	Metric.	*Apothecaries'.*
Strychnine Sulphate	0.175 Gm.	2½ grains.
Water	10 Cc.	2½ fluidrachms.
Elixir of Cinchona and Iron (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Strychnine Sulphate in the Water and add enough of the Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.0006 Gm. ($\frac{1}{1\,0\,0}$ grain) of Strychnine Sulphate, and about 0.13 Gm. (2 grains) of Soluble Ferric Phosphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR CINCHONÆ, PEPSINI ET STRYCHNINÆ.

Elixir of Cinchona, Pepsin and Strychnine.
Elixir of Calisaya, Pepsin and Strychnine.

	Metric.	*Apothecaries'.*
Quinine Sulphate	2 Gm.	30 grains.
Cinchonidine Sulphate	1 Gm.	15 grains.
Cinchonine Sulphate	1 Gm.	15 grains.
Strychnine Sulphate	0.175 Gm.	2½ grains.
Elixir of Pepsin (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the alkaloid salts in the Elixir, and filter, if necessary.

4 Cc. (1 fluidrachm) contain small quantities of Cinchona Alkaloids, 0.0006 Gm. ($\frac{1}{1\,0\,0}$ grain) of Strychnine Sulphate, and 0.065 Gm. (1 grain) of Pepsin.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR COCÆ.

Elixir of Coca.

Elixir of Erythroxylon.

	Metric.	*Apothecaries'.*
Fluidextract of Coca	125 Cc.	4 fluidounces.
Alcohol	62.5 Cc.	2 fluidounces.
Syrup (U. S. P.)	125 Cc.	4 fluidounces.
Tincture of Vanilla (U. S. P.)	16 Cc.	½ fluidounce.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Fluidextract with the Alcohol, the Syrup, and 650 Cc. (or 21 fluidounces) of the Aromatic Elixir, add the Purified Talc and incorporate the latter thoroughly. Let the mixture stand during forty-eight hours, if convenient, shaking occasionally; then filter, add the Tincture to the filtrate, and pass enough Aromatic Elixir through the filter to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 0.5 Gm. (7½ grains) of Coca (Erythroxylon).

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR COCÆ ET GUARANÆ.

Elixir of Coca and Guarana.

Elixir of Erythroxylon and Guarana.

	Metric.	*Apothecaries'.*
Fluidextract of Coca (U. S. P.)	125 Cc.	4 fluidounces.
Fluidextract of Guarana (U. S. P.)	125 Cc.	4 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Compound Elixir of Taraxacum (N. F.)	750 Cc.	24 fluidounces.

Mix the liquids, and thoroughly incorporate the Purified Talc with the mixture. Let it stand during forty-eight hours, if convenient, occasionally agitating, then filter.

4 Cc. (1 fluidrachm) represent 0.5 Gm. (7½ grains) each of Coca (Erythroxylon) and Guarana.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR CORYDALIS COMPOSITUM.

Compound Elixir of Corydalis.

	Metric.	*Apothecaries'.*
Fluidextract of Corydalis (N. F.)	60 Cc.	2 fluidounces.
Fluidextract of Stillingia (U. S. P.)	60 Cc.	2 fluidounces.
Fluidextract of Xanthoxylum (U. S. P.)	30 Cc.	1 fluidounce.
Fluidextract of Iris (N. F. Appendix)	90 Cc.	3 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Potassium Iodide	50 Gm.	1½ troy ounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Alcohol with the Fluidextracts, dissolve the Potassium Iodide in the mixture, and add enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Let the mixture stand a few days, if convenient, and filter.

4 Cc. (1 fluidrachm) contain about 0.2 Gm. (3 grains) of Potassium Iodide, and small quantities of the several Fluidextracts.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR CURASSAO.

Elixir of Curaçao.

Curaçao Cordial.

	Metric.	*Apothecaries'.*
Spirit of Curaçao (N. F.)	16 Cc.	250 minims.
Orris Root, in fine powder	4 Gm.	60 grains.
Alcohol	250 Cc.	8 fluidounces.
Citric Acid	7 Gm.	100 grains.
Syrup (U. S. P.)	500 Cc.	16 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	240 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Spirit of Curaçao with the Alcohol, add the Orris Root, the Purified Talc, and 185 Cc. (or 6 fluidounces) of Water. Allow the mixture to stand twelve hours, occasionally agitating; then pour it on a wetted filter, returning the first portions of the filtrate until it runs through clear, and pass enough Water through the filter to make the filtrate measure 500 Cc. (16 fluidounces). In this dissolve the Citric Acid, and finally add the Syrup.

Average dose: 16 Cc. (4 fluidrachms).

ELIXIR DIGESTIVUM COMPOSITUM.

Compound Digestive Elixir.

Compound Elixir of Pepsin.

	Metric.	*Apothecaries'.*
Pepsin (U. S. P.)	10 Gm.	150 grains.
Pancreatin (U. S. P.)	1 Gm.	15 grains.
Diastase	1 Gm.	15 grains.
Lactic Acid (U. S. P.)	0.5 Gm.	8 grains.
Hydrochloric Acid (U. S. P.)	1 Cc.	15 minims.
Glycerin	250 Cc.	8 fluidounces.
Water	125 Cc.	4 fluidounces.
Tincture of Cudbear (N. F.)	15 Cc.	½ fluidounce.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Acids with the Glycerin and Water, add the Pepsin, Pancreatin, and Diastase, to this mixture, and macerate with occasional shaking, until solution is apparently effected. Then add the Tincture of Cudbear and enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Incorporate the Purified Talc thoroughly with the mixture, and filter.

Average dose: 8 Cc. (2 fluidrachms).

Note.—The best commercial variety of Diastase, capable of converting the largest amount of Starch into Dextrin and Glucose, should be used for this preparation.

ELIXIR ERIODICTYI AROMATICUM.

Aromatic Elixir of Eriodictyon.

Aromatic Elixir of Yerba Santa; Elixir Corrigens.

	Metric.	*Apothecaries'.*
Fluidextract of Eriodictyon (U. S. P.)	60 Cc.	2 fluidounces.
Syrup (U. S. P.)	500 Cc.	16 fluidounces.
Pumice, in fine powder, and washed	30 Gm.	1 troy ounce.
Magnesium Carbonate	10 Gm.	150 grains.
Compound Elixir of Taraxacum (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix 440 Cc. (or 14 fluidounces) of the Elixir with the Syrup and Pumice, then add the Fluidextract, and mix the whole thoroughly by agitation. Shake the mixture occasionally during two hours, then allow it to settle, and carefully decant the liquid into a funnel, the neck of which contains a small pellet of absorbent cotton. Afterwards add the

dregs and allow them to drain. To the filtrate add the Magnesium Carbonate, and shake occasionally during several hours Let the mixture stand at rest during twelve hours, if convenient, then decant the liquid and filter it through paper. To the filtrate add enough of the Elixir, if necessary, to make 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation is chiefly intended as a vehicle for Quinine and other bitter remedies.

ELIXIR EUCALYPTI.

Elixir of Eucalyptus.

	Metric.	*Apothecaries'.*
Fluidextract of Eucalyptus (U. S. P.)	125 Cc.	4 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Syrup of Coffee (N. F.)	375 Cc.	12 fluidounces.
Compound Elixir of Taraxacum (N. F.) . . .	375 Cc.	12 fluidounces.

Mix the Fluidextract with the Alcohol, then add the other ingredients, shake the mixture occasionally during forty-eight hours, if convenient, and filter.

4 Cc. (1 fluidrachm) represent 0.5 Gm. (7½ grains) of Eucalyptus.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR EUONYMI.

Elixir of Euonymus.

Elixir of Wahoo.

	Metric.	*Apothecaries'.*
Fluidextract of Euonymus (U. S. P.)	150 Cc.	5 fluidounces.
Water	125 Cc.	4 fluidounces.
Syrup of Coffee (N. F.)	125 Cc.	4 fluidounces.
Compound Elixir of Taraxacum (N. F.)	600 Cc.	19 fluidounces.

Mix them, let the mixture stand forty-eight hours, if convenient, and filter.

4 Cc. (1 fluidrachm) represent about 0.63 Gm. (9½ grains) of Euonymus.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FERRI HYPOPHOSPHITIS.

Elixir of Hypophosphite of Iron.

	Metric.	*Apothecaries'.*
Solution of Hypophosphite of Iron (N. F.) . .	100 Cc.	3¼ fluidounces.
Aromatic Elixir (U. S. P)	900 Cc.	28¾ fluidounces.

Mix, allow the mixture to stand a few days in a cool place, if convenient, and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Ferric Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FERRI LACTATIS.

Elixir of Lactate of Iron.

	Metric.	*Apothecaries'.*
Lactate of Iron, in crusts	17.5 Gm.	256 grains.
Potassium Citrate	52.5 Gm.	768 grains.
Water	120.0 Cc.	4 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Lactate of Iron and Potassium Citrate in the Water with the aid of a little heat. Then add enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Lactate of Iron.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FERRI PHOSPHATIS

Elixir of Phosphate of Iron.

	Metric.	*Apothecaries'.*
Soluble Ferric Phosphate (U. S. P.)	35 Gm.	512 grains.
Water	60 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Soluble Ferric Phosphate in the Water with the aid of heat; then mix this solution with a sufficient quantity of Elixir to make 1000 Cc. (or 32 fluidounces) and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Soluble Ferric Phosphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FERRI PYROPHOSPHATIS.

Elixir of Pyrophosphate of Iron.

	Metric.	*Apothecaries'.*
Soluble Ferric Pyrophosphate (U. S. P.)	35 Gm.	512 grains.
Water	60 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Soluble Ferric Pyrophosphate in the Water, and add

enough of the Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Soluble Ferric Pyrophosphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FERRI PYROPHOSPHATIS, QUININÆ ET STRYCHNINÆ.

Elixir of Pyrophosphate of Iron, Quinine, and Strychnine.

	Metric.	*Apothecaries'.*
Soluble Ferric Pyrophosphate (U. S. P.)	35. Gm.	512 grains.
Quinine Sulphate	8.75 Gm.	128 grains.
Strychnine (alkaloid)	0.14 Gm.	2 grains.
Citric Acid	0.7 Gm.	10 grains.
Oil of Orange (fresh)	0.7 Cc.	10 minims.
Alcohol	250. Cc.	8 fluidounces.
Syrup (U. S. P.)	375. Cc.	12 fluidounces.
Ammonia Water, Distilled Water, each a sufficient quantity		
To make	1000. Cc.	32 fluidounces.

Triturate the Quinine Sulphate, Strychnine and Citric Acid together, until minutely divided, then add the Alcohol and Oil of Orange. Warm the Syrup slightly (to about 65° C. = 150° F.), and add it to the turbid mixture, which upon stirring should become clear. To this add the Soluble Ferric Pyrophosphate, previously dissolved in 320 Cc. (or 11 fluidounces) of Distilled Water, and then Ammonia Water, drop by drop, until the liquid is perfectly neutral to test paper. Finally add sufficient Distilled Water to make 1000 Cc. (or 32 fluidounces) of Elixir, and filter.

4 Cc. (1 fluidrachm) contain 0.0005 Gm. ($\frac{1}{128}$ grain) of Strychnine, 0.032 Gm. (½ grain) Quinine Sulphate, and 0.13 Gm. (2 grains) of Soluble Ferric Pyrophosphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FERRI, QUININÆ ET STRYCHNINÆ.

Elixir of Iron, Quinine and Strychnine.

	Metric.	*Apothecaries'.*
Tincture of Citro-Chloride of Iron (N. F.)	125 Cc.	4 fluidounces.
Quinine Hydrochloride	8.75 Gm.	128 grains.
Strychnine Sulphate	0.175 Gm.	2½ grains.
Alcohol	35 Cc.	1 fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the alkaloid salts in 750 Cc. (24 fluidounces) of the Elixir, then add the Tincture and the Alcohol. Finally add enough Elixir to make 1000 Cc. (32 fluidounces) and filter, if necessary.

4 Cc. (1 fluidrachm) represent about 0.065 Gm. (1 grain) of Ferric Chloride, 0.032 Gm. (½ grain) of Quinine Hydrochloride, and 0.0006 Gm. ($\frac{1}{100}$ grain) of Strychnine Sulphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR FRANGULÆ.

Elixir of Frangula.

Elixir of Buckthorn.

	Metric.	*Apothecaries'.*
Fluidextract of Frangula (U. S. P.)	250 Cc.	8 fluidounces.
Alcohol	60 Cc.	2 fluidounces.
Compound Elixir of Taraxacum (N. F.) . . .	250 Cc.	8 fluidounces.
Aromatic Elixir (U. S. P.)	440 Cc.	14 fluidounces.

Mix them, allow the mixture to stand during forty-eight hours, if convenient, and filter.

4 Cc. (1 fluidrachm) represent 1 Gm. (15 grains) of Frangula.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR GENTIANÆ.

Elixir of Gentian.

	Metric.	*Apothecaries'.*
Fluidextract of Gentian (U. S. P.)	35 Cc.	1 fluidounce.
Compound Spirit of Cardamom (N. F.) . . .	25 Cc.	6 fluidrachms.
Solution of Ferric Sulphate (U. S. P.)	25 Cc.	6 fluidrachms.
Ammonia Water (U. S. P.)	28 Cc.	7 fluidrachms.
Alcohol,		
Water,		
Aromatic Elixir (U. S. P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dilute the Solution of Ferric Sulphate with 250 Cc. (or 8 fluidounces) of cold Water, and add it, constantly stirring, to the Ammonia Water, previously diluted with an equal volume of cold Water. Collect the precipitate on a well wetted muslin strainer, allow it to drain completely, return it to the vessel, mix it intimately with 250 Cc. (or 8 fluidounces) of Water, and again drain. Repeat this operation once more with the same quantity of Water. When the precipitate has been

completely drained for the third time, fold the strainer, and press it gently so as to remove the Water as completely as possible without loss of magma; then remove the magma into a tared bottle, and ascertain its weight. Now add to the magma *one-fifth* ($\frac{1}{5}$) of its weight of Alcohol, the Fluidextract, the Compound Spirit, and 750 Cc. (or 24 fluidounces) of Aromatic Elixir, and shake the mixture occasionally during twenty-four hours. Filter through paper, and pass enough Aromatic Elixir through the filter to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.13 Gm. (2 grains) of Gentian.

Average dose : 4 Cc. (1 fluidrachm).

ELIXIR GENTIANÆ CUM TINCTURA FERRI CHLORIDI.

Elixir of Gentian with Tincture of Chloride of Iron.

	Metric.	*Apothecaries'.*
Tincture of Citro-Chloride of Iron (N. F.) . . .	100 Cc.	3¼ fluidounces.
Elixir of Gentian (N. F.)	900 Cc.	28¾ fluidounces.

Mix and filter, if necessary.

4 Cc. (1 fluidrachm) represent 0.048 Gm. (¾ grain) of Ferric Chloride, and nearly 0.13 Gm. (2 grains) of Gentian.

Average dose : 4 Cc. (1 fluidrachm).

ELIXIR GENTIANÆ ET FERRI PHOSPHATIS.

Elixir of Gentian and Phosphate of Iron.

Elixir Gentianæ Ferratum. Ferrated Elixir of Gentian. Ferrophosphated Elixir of Gentian.

	Metric.	*Apothecaries'.*
Soluble Ferric Phosphate (U. S. P.)	17.5 Gm.	256 grains.
Water	35 Cc.	1 fluidounce.
Elixir of Gentian (N.F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Soluble Ferric Phosphate in the Water with the aid of heat, and add enough Elixir of Gentian to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) represent 0.065 Gm. (1 grain) of Soluble Ferric Phosphate, and nearly 0.13 Gm. (2 grains) of Gentian.

Average dose : 4 Cc. (1 fluidrachm).

ELIXIR GENTIANÆ GLYCERINATUM.

Glycerinated Elixir of Gentian.

	Metric.	*Apothecaries'.*
Fluidextract of Gentian (U. S. P.)	10 Cc.	150 minims.
Fluidextract of Taraxacum (U. S. P.)	15 Cc.	240 minims.
Acetic Ether	5 Cc.	75 minims.
Phosphoric Acid (U. S. P. = 85 %)	8.5 Gm.	128 grains.
Tincture of Sweet Orange Peel (U. S. P.)	15 Cc.	240 minims.
Compound Tincture of Cardamom (U. S. P.)	60 Cc.	2 fluidounces.
Solution of Saccharin (N. F.)	30 Cc.	1 fluidounce.
Glycerin	400 Cc.	13 fluidounces.
Sugar	200 Gm.	6½ troy ounces.
White Wine (Sherry) a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sugar in 325 Cc. (or 10 fluidounces) of White Wine; add the other ingredients, previously mixed, and sufficient White Wine to make 1000 Cc. (or 32 fluidounces). Allow to stand twenty-four hours, if convenient, and filter.

Average dose: 8 Cc. (4 fluidrachms.)

ELIXIR GLYCYRRHIZÆ.

Elixir of Glycyrrhiza.

Elixir of Licorice.

	Metric.	*Apothecaries'.*
Fluidextract of Glycyrrhiza (U. S. P.)	125 Cc.	4 fluidounces.
Aromatic Elixir (U. S. P.)	875 Cc.	28 fluidounces.
Magnesium Carbonate	10 Gm.	150 grains.

Triturate the Magnesium Carbonate with the Fluidextract, add the Elixir, and shake the mixture occasionally during an hour; then filter.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR GLYCYRRHIZÆ AROMATICUM.

Aromatic Elixir of Glycyrrhiza.
Aromatic Elixir of Licorice.

	Metric.	*Apothecaries'.*
Fluidextract of Glycyrrhiza (U. S. P.)	125. Cc.	4 fluidounces.
Oil of Cloves	0.75 Cc.	12 minims.
Oil of Cinnamon	0.75 Cc.	12 minims.
Oil of Myristica	0.5 Cc.	8 minims.
Oil of Fennel	1.5 Cc.	24 minims.
Purified Talc (U. S. P.)	15. Gm.	½ troy ounce.
Aromatic Elixir (U. S. P.)	875. Cc.	28 fluidounces.

Triturate the Oils with the Purified Talc, gradually add the Elixir

and Fluidextract, and shake the mixture occasionally for an hour; set the mixture aside for a day or two, if convenient, then filter.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR GLYCEROPHOSPHATUM.

Elixir of Glycerophosphates.

	Metric.	*Apothecaries'.*
Sodium Glycerophosphate (75%)	25. Gm.	360 grains.
Calcium Glycerophosphate	8.75 Gm.	128 grains.
Phosphoric Acid (U. S. P.—85%)	8. Gm.	115 grains.
Glycerin	300. Cc.	9½ fluidounces.
Aromatic Elixir (U. S. P.)	300. Cc.	9½ fluidounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Glycerophosphates and the Acid in 300 Cc. (or 9½ fluidounces) of Distilled Water, add the Glycerin and Elixir, and finally enough Distilled Water, to make 1000 Cc. (or 32 fluidounces); then mix well, and filter.

4 Cc. (1 fluidrachm) contain 0.65 Gm. (1 grain) of *absolute* Sodium Glycerophosphate, and 0.32 Gm. (½ grain) of Calcium Glycerophosphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR GRINDELIÆ.

Elixir of Grindelia.

	Metric.	*Apothecaries'.*
Fluidextract of Grindelia (U. S. P.)	65 Cc.	2 fluidounces.
Compound Spirit of Orange (U. S. P.)	10 Cc.	150 minims.
Alcohol	115 Cc.	3½ fluidounces.
Compound Elixir of Taraxacum (N. F.)	810 Cc.	26 fluidounces.

Mix them; allow the mixture to stand a few days, if convenient, and filter.

4 Cc. (1 fluidrachm) represent 0.25 Gm. (4 grains) of Grindelia.

Average dose: 8 Cc. (2 fluidrachm).

ELIXIR GUARANÆ.

Elixir of Guarana.

	Metric.	*Apothecaries'.*
Fluidextract of Guarana (U. S. P.)	200 Cc.	6 fluidounces.
Aromatic Elixir (U. S. P.)	200 Cc.	6 fluidounces.
Compound Elixir of Taraxacum (N. F.)	600 Cc.	18 fluidounces.

Mix them; allow the mixture to stand during forty-eight hours, if convenient, and filter.

4 Cc. (1 fluidrachm) represent about 0.75 Gm. (12 grains) of Guarana.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR HUMULI.

Elixir of Humulus.

Elixir of Hops.

	Metric.	*Apothecaries'.*
Fluidextract of Hops (N. F.)	125 Cc.	4 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Tincture of Vanilla (U. S. P.)	30 Cc.	1 fluidounce.
Compound Elixir of Taraxacum (N. F.) . . .	125 Cc.	4 fluidounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Fluidextract of Hops with the Purified Talc, then gradually add the Compound Elixir of Taraxacum, Tincture of Vanilla, and enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Allow the mixture to stand several days, if convenient, occasionally agitating; then filter.

4 Cc. (1 fluidrachm) represent 0.5 Gm. (7½ grains) of Humulus (Hops).

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR HYPOPHOSPHITUM.

Elixir of Hypophosphites.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	52.5 Gm.	768 grains.
Sodium Hypophosphite	17.5 Gm.	256 grains.
Potassium Hypophosphite	17.5 Gm.	256 grains.
Hypophosphorous Acid (U. S. P.)	4 Cc.	60 minims.
Water	420 Cc.	14 fluidounces.
Glycerin	30 Cc.	1 fluidounce.
Compound Spirit of Cardamom (N. F.) . .	30 Cc.	1 fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Hypophosphites and the Acid in the Water; then add the Glycerin, Compound Spirit of Cardamom, and enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.2 Gm. (3 grains) of Calcium Hypo-

phosphite and 0.065 Gm. (1 grain), each, of Sodium and Potassium Hypophosphite.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR HYPOPHOSPHITUM CUM FERRO.

Elixir of Hypophosphites with Iron.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	25 Gm.	360 grains.
Sodium Hypophosphite	17.5 Gm.	256 grains.
Potassium Hypophosphite	8.75 Gm.	128 grains.
Ferrous Sulphate, in clear crystals	13 Gm.	192 grains.
Hypophosphorous Acid (U. S. P.)	4 Cc.	60 minims.
Water	250 Cc.	8 fluidounces.
Syrup (U. S. P.)	250 Cc.	8 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Hypophosphites in 175 Cc. (or 6 fluidounces) of Water, and add the Syrup. Dissolve the Ferrous Sulphate in the remainder of the Water, and mix this with the other solution. Then add 350 Cc. (or 12 fluidounces) of Aromatic Elixir, set the mixture aside, in a cold place, for twelve hours, and filter from the deposited calcium sulphate. Finally add the Acid to the filtrate, and pass enough Aromatic Elixir through the filtrate to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 0.032 Gm. (½ grain), each, of Potassium and Ferrous Hypophosphite, and 0.065 Gm. (1 grain), each, of Calcium and Sodium Hypophosphite.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR LITHII BROMIDI.

Elixir of Lithium Bromide.

	Metric.	*Apothecaries'.*
Lithium Bromide	85 Gm.	2⅔ troy ounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Lithium Bromide in about 850 Cc. (or 29 fluidounces) of the Elixir, by agitation. Then add enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain about 0.3 Gm. (5 grains) of Lithium Bromide.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR LITHII CITRATIS.

Elixir of Lithium Citrate.

	Metric.	*Apothecaries'.*
Lithium Citrate	85 Gm.	2⅔ troy ounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Lithium Citrate in about 850 Cc. (or 29 fluidounces) of the Elixir, by agitation. Then add enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain 0.3 Gm. (5 grains) of Lithium Citrate.

Average dose: 6 Cc. (1½ fluidrachms).

ELIXIR LITHII SALICYLATIS.

Elixir of Lithium Salicylate.

	Metric.	*Apothecaries'.*
Lithium Salicylate	85 Gm.	2⅔ troy ounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Lithium Salicylate in about 850 Cc. (or 29 fluidounces) of the Elixir, by agitation. Then add enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain 0.3 Gm. (5 grains) of Lithium Salicylate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR MALTI ET FERRI.

Elixir of Malt and Iron.

	Metric.	*Apothecaries'.*
Extract of Malt (U. S. P.)	250 Cc.	8 fluidounces.
Soluble Ferric Phosphate (U. S. P.)	17.5 Gm.	256 grains.
Water	30 Cc.	1 fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Soluble Ferric Phosphate in the Water by the aid of heat, mix the solution with the Extract previously introduced into a graduated bottle, and add enough of the Elixir to make 1000 Cc. (or 32 fluidounces). Set the mixture aside for twenty-four hours, and filter.

4 Cc. (1 fluidrachm) represent (1 grain) of Soluble Ferric Phosphate, and 1 Cc. (15 minims) of Extract of Malt.

Average dose: 16 Cc. (4 fluidrachms).

ELIXIR PARALDEHYDI.

Elixir of Paraldehyde.

(25%.)

	Metric.	*Apothecaries'.*
Paraldehyde	250 Cc.	8 fluidounces.
Glycerin	125 Cc.	4 fluidounces.
Alcohol	315 Cc.	10 fluidounces.
Tincture of Cardamom (U. S. P.)	17.5 Cc.	½ fluidounce.
Oil of Orange	2 Cc.	30 minims.
Oil of Cinnamon	2 Cc.	30 minims.
Compound Tincture of Cudbear (N. F.)	15 Cc.	½ fluidounce.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the ingredients in the order given, and filter, if necessary.

4 Cc. (1 teaspoonful) contain about 1 Cc. (15 minims) of Paraldehyde.

Average dose: 8 Cc. (2 fluidrachms).

Note.—Elixir of Paraldehyde varies in strength from 10 to 25% as prescribed in different localities. The formula here given produces a 25% Elixir, and from this the weaker preparations may readily be made by the addition of Aromatic Elixir (U. S. P.), colored with Compound Tincture of Cudbear in the proportion used in the above formula.

ELIXIR PEPSINI.

Elixir of Pepsin.

	Metric.	*Apothecaries'.*
Glycerite of Pepsin (N. F.)	200 Cc.	6½ fluidounces.
Glycerin	100 Cc.	3¼ fluidounces.
Hydrochloric Acid (U. S. P.)	4 Cc.	60 minims.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix; allow to stand several days, if convenient, and filter, if necessary.

4 Cc. (1 fluidrachm) contain about 0.065 Gm. (1 grain) of Pepsin.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR PEPSINI, BISMUTHI ET STRYCHNINÆ.

Elixir of Pepsin, Bismuth and Strychnine.

	Metric.	*Apothecaries'.*
Strychnine (Alkaloid)	0.175 Gm.	2½ grains.
Tartaric Acid	0.175 Gm.	2½ grains.
Elixir of Pepsin and Bismuth (N. F.)	1000 Cc.	32 fluidounces.

Triturate the Strychnine and Tartaric Acid with 30 Cc. (1 fluid-

ounce) of the Elixir, until dissolved; then add the remainder, mix well, and filter, if necessary.

4 Cc. (1 fluidrachm) contain about 0.006 Gm. ($\frac{1}{100}$ grain) of Strychnine, 0.034 Gm. (½ grain) of Pepsin, and 0.13 Gm. (2 grains) of Bismuth and Sodium Tartrate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR PEPSINI ET BISMUTHI.

Elixir of Pepsin and Bismuth.

	Metric.	*Apothecaries'.*
Pepsin (U. S. P.)	8.5 Gm.	128 grains.
Glycerin	125.0 Cc.	4 fluidounces.
Glycerite of Bismuth (N. F.)	125.0 Cc.	4 fluidounces.
Distilled Water	250.0 Cc.	8 fluidounces.
Aromatic Elixir (U. S. P.)	500.0 Cc.	16 fluidounces.

Dissolve the Pepsin in the Glycerin and Distilled Water; add the Glycerite of Bismuth and Aromatic Elixir and mix.

4 Cc. (1 fluidrachm) contain 0.034 Gm. (½ grain) of Pepsin, and 0.13 Gm. (2 grains) of Bismuth and Sodium Tartrate.

Average dose: 8 Cc. (2 fluidrachms).

Note.—If desirable this Elixir may be colored by the addition of 2.5 Cc. (40 minims) of Caramel, and the Distilled Water then reduced accordingly.

ELIXIR PEPSINI ET FERRI.

Elixir of Pepsin and Iron.

	Metric.	*Apothecaries'.*
Tincture of Citro-Chloride of Iron (N. F.)	75 Cc.	2⅜ fluidounces.
Elixir of Pepsin	925 Cc.	29⅝ fluidounces.

Mix and filter, if necessary.

4 Cc. (1 fluidrachm) represent about 0.034 Gm. (½ grain) of Ferric Chloride, and nearly 0.065 Gm. (1 grain) of Pepsin.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR PHOSPHORI.

Elixir of Phosphorus.

	Metric.	*Apothecaries'.*
Spirit of Phosphorus (N. F.)	210 Cc.	7 fluidounces.
Oil of Anise	2 Cc.	30 minims.
Glycerin	560 Cc.	18 fluidounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

To the Spirit in a graduated bottle add the Oil and Glycerin; mix them by repeatedly inverting the bottle, and when the mixture is clear add the Elixir, in several portions, gently agitating after each addition, until a clear mixture results, and 1000 Cc. (or 32 fluidounces) are obtained.

"Keep the product in dark amber colored, well-stoppered bottles, in a cool and dark place."

4 Cc. (1 fluidrachm) represent about 0.001 Gm. ($\frac{1}{60}$ grain) of Phosphorus.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR PHOSPHORI ET NUCIS VOMICÆ.

Elixir of Phosphorus and Nux Vomica.

	Metric.	*Apothecaries'.*
Tincture of Nux Vomica (U. S. P.)	4.35 Cc.	65 minims.
Elixir of Phosphorus (N. F.), a sufficient quantity		
To make	125 Cc.	4 fluidounces.

Mix them. This preparation should be freshly made, when wanted for use.

4 Cc. (1 fluidrachm) represent 0.13 Cc. (2 minims) of Tincture of Nux Vomica, and about 0.001 Gm. ($\frac{1}{60}$ grain) of Phosphorus.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR PICIS COMPOSITUM.

Compound Elixir of Tar.

	Metric.	*Apothecaries'.*
Syrup of Wild Cherry (U. S. P.)	200 Cc.	6 fluidounces.
Syrup of Tolu (U. S. P.)	200 Cc.	6 fluidounces.
Morphine Sulphate	0.35 Gm.	5 grains.
Alcohol	50 Cc.	12 fluidrachms.
Water	10 Cc.	150 minims.
Wine of Tar (N. F.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Morphine Sulphate in the water, add the Syrups and Alcohol, and then sufficient of the Wine to make 1000 Cc. (or 32 fluidounces). Allow to stand a day or two, if convenient, and filter, if necessary.

4 Cc. (1 fluidrachm) contain about 0.0013 Gm. ($\frac{1}{50}$ grain) of Morphine Sulphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR PILOCARPI.

Elixir of Pilocarpus.

Elixir of Jaborandi.

	Metric.	*Apothecaries'.*
Fluidextract of Pilocarpus (U. S. P.)	65 Cc.	2 fluidounces.
Syrup of Coffee (N. F.)	200 Cc.	6 fluidounces.
Tincture of Vanilla (U. S. P.)	35 Cc.	1 fluidounce.
Compound Elixir of Taraxacum (N. F.) . . .	700 Cc.	23 fluidounces.

Mix them; allow the mixture to stand during four days, if convenient, and filter.

4 Cc. (1 fluidrachm) represent 0.245 Gm. (3¾ grains) of Pilocarpus.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR POTASSII ACETATIS.

Elixir of Potassium Acetate.

	Metric.	*Apothecaries'.*
Potassium Acetate	85 Gm.	2⅔ troy ounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Potassium Acetate in 850 Cc. (or 29 fluidounces) of the Elixir, then add enough of the latter to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

4 Cc. (1 fluidrachm) contain about 0.34 Gm. (5 grains) of Potassium Acetate.

Average dose: 16 Cc. (4 fluidrachms).

ELIXIR POTASSII ACETATIS ET JUNIPERI.

Elixir of Potassium Acetate and Juniper.

	Metric.	*Apothecaries'.*
Potassium Acetate	85 Gm.	2⅔ troy ounces.
Fluidextract of Juniper (N. F.)	125 Cc.	4 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Fluidextract of Juniper with the Purified Talc, add 750 Cc. (or 24 fluidounces) of the Elixir in which the Potassium Acetate has previously been dissolved; then add enough Elixir to make 1000 Cc (or 32 fluidounces) and shake occasionally. Allow to stand for a day or two, if convenient, and filter.

4 Cc. (1 fluidrachm) represent 0.34 Gm. (5 grains) of Potassium Acetate, and 0.5 Gm. (7½ grains) of Juniper.

Average dose: 16 Cc. (4 fluidrachms).

ELIXIR POTASSII BROMIDI.

Elixir of Potassium Bromide.

	Metric.	*Apothecaries'.*
Potassium Bromide	175 Gm.	5⅔ troy ounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Potassium Bromide in about 825 Cc. (or 27 fluidounces) of the Elixir, by agitation. Then add enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain 0.65 Gm. (10 grains) of Potassium Bromide.

Average dose: 8 Cc. (2 fluidrachms).

Note.—If a colored Elixir is preferred add 15 Cc. (or ½ fluidounce) of Compound Tincture of Cudbear (N. F.) in place of the same quantity of Aromatic Elixir.

ELIXIR QUININÆ ET PHOSPHATUM COMPOSITUM.

Compound Elixir of Quinine and Phosphates.

	Metric.	*Apothecaries'.*
Quinine Sulphate	4 Gm.	64 grains.
Soluble Ferric Phosphate (U. S. P.)	17.5 Gm.	256 grains.
Potassium Citrate	17.5 Gm.	256 grains.
Syrup of Calcium Lactophosphate (U. S. P.)	250 Cc.	8 fluidounces.
Water	30 Cc.	1 fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Quinine Sulphate in 600 Cc. (or 20 fluidounces) of the Elixir, if necessary, with the aid of a gentle heat. Dissolve the Soluble Ferric Phosphate and the Potassium Citrate in the Water, and add the solution to that first prepared. Then add the Syrup of Calcium Lactophosphate, and enough Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.016 Gm. (¼ grain) of Quinine Sulphate, 0.065 Gm. (1 grain) of Soluble Ferric Phosphate, and about 0.048 Gm. (¾ grain) of so-called Calcium Lactophosphate.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR QUININÆ VALERIANATIS ET STRYCHNINÆ.

Elixir of Quinine Valerianate and Strychnine.

	Metric.	*Apothecaries'.*
Quinine Valerianate	17.5 Gm.	256 grains.
Strychnine Sulphate	0.175 Gm.	2½ grains.
Compound Tincture of Cudbear (N. F.)	15 Cc.	½ fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Quinine Valerianate and the Strychnine Sulphate with about 500 Cc. (or 16 fluidounces) of the Elixir, until they are dissolved. Then add the Compound Tincture of Cudbear, and enough Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Quinine Valerianate, and 0.0006 Gm. ($\frac{1}{100}$ grain) of Strychnine Sulphate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR RHAMNI PURSHIANÆ.

Elixir of Cascara Sagrada.
Elixir of Rhamnus Purshiana.

	Metric.	*Apothecaries'.*
Aromatic Fluidextract of Cascara Sagrada (U. S. P.)	500 Cc.	16 fluidounces.
Aromatic Elixir (U. S. P.)	500 Cc.	16 fluidounces.

Mix them; allow the mixture to stand a few days, if convenient, and filter, if necessary.

4 Cc. (1 fluidrachm) represent 2 Gm. (30 grains) of Cascara Sagrada.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR RHAMNI PURSHIANÆ COMPOSITUM.

Compound Elixir of Cascara Sagrada.

Elixir Laxativum. Laxative Elixir.

	Metric.	*Apothecaries'.*
Aromatic Fluidextract of Cascara Sagrada (U. S. P.)	125 Cc.	4 fluidounces.
Fluidextract of Senna (U. S. P.)	75 Cc.	2½ fluidounces.
Fluidextract of Juglans (N. F.)	65 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.)	735 Cc.	23½ fluidounces.

Mix them; allow the mixture to stand a few days, if convenient, and filter.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR RHEI.

Elixir of Rhubarb.

	Metric.	*Apothecaries'.*
Sweet Tincture of Rhubarb (N. F. Appendix)	500 Cc.	16 fluidounces.
Alcohol	65 Cc.	2 fluidounces.
Water	185 Cc.	6 fluidounces.
Glycerin	125 Cc.	4 fluidounces.
Syrup (U. S. P.)	125 Cc.	4 fluidounces.

Mix them, and filter.

4 Cc. (1 fluidrachm) represent about 0.145 Gm. (2¼ grains) of Rhubarb.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR RHEI ET MAGNESII ACETATIS.

Elixir of Rhubarb and Magnesium Acetate.

Elixir Rhei et Magnesiæ. Elixir of Rhubarb and Magnesia.

	Metric.	*Apothecaries'.*
Magnesia, calcined	20 Gm.	300 grains.
Acetic Acid (U. S. P.), a sufficient quantity.		
Fluidextract of Rhubarb (U. S. P.)	125 Cc.	4 fluidounces.
Aromatic Elixir (U.S.P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Magnesia in 150 Cc. (or 5 fluidounces) of Acetic Acid, with the aid of a gentle heat, adding, if necessary, a little more Acetic Acid, drop by drop, until the solution is neutral to test-paper. Then add the Fluidextract and enough Aromatic Elixir to make 1000 Cc. (or 32 fluidounces), allow to stand a day or two, if convenient, and filter.

4 Cc. (1 fluidrachm) represent about 0.25 Gm. (4 grains) of Magnesium Acetate, and 0.5 Gm. (7½ grains) of Rhubarb.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR RUBI COMPOSITUM.

Compound Elixir of Blackberry.

	Metric.	*Apothecaries'.*
Blackberry Root	160 Gm.	5 troy ounce.
Galls	160 Gm.	5 troy ounces.
Cinnamon, Saigon	160 Gm.	5 troy ounces.
Cloves	40 Gm.	1¼ troy ounce.
Mace	20 Gm.	300 grains.
Ginger	20 Gm.	300 grains.
Blackberry Juice, recently expressed	3750 Cc.	120 fluidounces.
Syrup (U. S. P.)	1875 Cc.	60 fluidounces.
Glycerin	1875 Cc.	60 fluidounces.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	10000 Cc.	320 fluidounces.

Reduce the solids to a moderately coarse (No. 40) powder, moisten it with Diluted Alcohol, and percolate it with this menstruum in the usual manner, until 2500 Cc. (80 fluidounces) of percolate are obtained. To this add the Blackberry Juice, Syrup and Glycerin, and mix thoroughly; allow to stand several days, if convenient, and filter.

Average dose: 16 Cc. (4 fluidrachms).

ELIXIR SODII BROMIDI.

Elixir of Sodium Bromide.

	Metric.	*Apothecaries'.*
Sodium Bromide	175 Gm.	5⅔ troy ounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Bromide in about 825 Cc. (or 27 fluidounces) of the Elixir, by agitation. Then add enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.65 Gm. (10 grains) of Sodium Bromide.

Average dose: 8 Cc. (2 fluidrachms).

ELIXIR SODII HYPOPHOSPHITIS.

Elixir of Sodium Hypophosphite.

	Metric.	*Apothecaries'.*
Sodium Hypophosphite	35 Gm.	512 grains.
Hypophosphorous Acid (U. S. P.)	4 Cc.	60 minims.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Hypophosphite in about 825 Cc. (or 27 fluidounces) of the Elixir, by agitation. Then add the Acid and enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Sodium Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR SODII SALICYLATIS.

Elixir of Sodium Salicylate.

	Metric.	*Apothecaries'.*
Sodium Salicylate	85 Gm.	2⅔ troy ounces.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Salicylate in about 825 Cc. (or 27 fluidounces) of the Elixir, by agitation. Then add enough Elixir to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

This Elixir should be freshly prepared, when required for use.

4 Cc. (1 fluidrachm) contain 0.34 Gm. (5 grains) of Sodium Salicylate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR STILLINGIÆ COMPOSITUM.

Compound Elixir of Stillingia.

	Metric.	*Apothecaries'.*
Compound Fluidextract of Stillingia (N. F.) .	250 Cc.	8 fluidounces.
Aromatic Elixir (U. S. P.)	750 Cc.	24 fluidounces.

Mix them, allow the mixture to stand a few days, or longer, if convenient, and filter.

4 Cc. (1 fluidrachm) represent 1 Cc. (15 minims) of Compound Fluidextract of Stillingia.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR STRYCHNINÆ VALERIANATIS.

Elixir of Strychnine Valerianate.

	Metric.	*Apothecaries'.*
Strychnine Valerianate	0.175 Gm.	2½ grains.
Acetic Acid (U.S.P.), a sufficient quantity.		
Tincture of Vanilla (U. S. P.)	15 Cc.	½ fluidounce.
Compound Tincture of Cudbear (N. F.) .	15 Cc.	½ fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Strychnine Valerianate with about 60 Cc. (or 2 fluidounces) of the Elixir, gradually added, and effect complete solution by the addition of one or more drops of Acetic Acid, avoiding an excess. Then add the Tinctures, and lastly, enough Elixir to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.0006 Gm. ($\frac{1}{100}$ grain) of Strychnine Valerianate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR TARAXACI COMPOSITUM.

Compound Elixir of Taraxacum.

	Metric.	*Apothecaries'.*
Fluidextract of Taraxacum (U. S. P.)	35 Cc.	512 minims.
Fluidextract of Wild Cherry (U. S. P.)	20 Cc.	300 minims.
Fluidextract of Licorice (U. S. P.)	60 Cc.	2 fluidounces.
Tincture of Sweet Orange Peel (U. S. P.) . . .	60 Cc.	2 fluidounces.
Tincture of Cinnamon (U. S. P.)	30 Cc.	1 fluidounce.
Compound Tincture of Cardamom (U. S. P.) .	30 Cc.	1 fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix them. Allow to stand several days, if convenient, and filter.

Average dose: 8 Cc. (2 fluidrachms).

Note.—If a precipitate forms in this preparation, it should be removed by filtration. This Elixir is chiefly intended as a vehicle or corrigent, to cover the bitter taste of Quinine and similar substances.

ELIXIR TERPINI HYDRATIS.

Elixir of Terpin Hydrate.

	Metric.	*Apothecaries'.*
Terpin Hydrate, in fine powder	17.5 Gm.	256 grains.
Tincture of Sweet Orange Peel (U. S. P.) . .	10. Cc.	150 minims.
Solution of Saccharin (N. F.)	1. Cc.	15 minims.
Alcohol	400. Cc.	13 fluidounces.
Glycerin	400. Cc.	13 fluidounces.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Terpin Hydrate in the Alcohol, add the Tincture, the Solution and the Glycerin; then add enough Syrup to make 1000 Cc. (or 32 fluidounces). Mix well, and filter, if necessary.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Terpin Hydrate.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR TERPINI HYDRATIS CUM CODEINA.

Elixir of Terpin Hydrate with Codeine.

	Metric.	*Apothecaries'.*
Codeine	2.2 Gm.	32 grains.
Elixir of Terpin Hydrate (N. F.)	1000. Cc.	32 fluidounces.

Dissolve the Codeine in the Elixir, by trituration.

4 Cc. (1 teaspoonful) contain 0.065 Gm. (1 grain) of Terpin Hydrate and 0.0084 Gm. (⅛ grain) of Codeine.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR TERPINI HYDRATIS CUM HEROINA.

Elixir of Terpin Hydrate with Heroine.

	Metric.	*Apothecaries'.*
Heroine	0.75 Gm.	11 grains.
Elixir of Terpin Hydrate	1000. Cc.	32 fluidounces.

Dissolve the Heroine in the Elixir.

4 Cc. (1 teaspoonful) contain 0.065 Gm. (1 grain) of Terpin Hydrate, and 0.0027 Gm. ($\frac{1}{24}$ grain) of Heroine.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR TURNERÆ.

Elixir of Turnera.

Elixir of Damiana.

	Metric.	*Apothecaries'.*
Fluidextract of Turnera (N. F.)	150 Cc.	5 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Alcohol	250 Cc.	8 fluidounces.
Glycerin	65 Cc.	2 fluidounces.
Aromatic Elixir (U. S. P.)	535 Cc.	17 fluidounces.

Mix the Fluidextract with the Alcohol, add the Glycerin and the Elixir, and triturate the Purified Talc with this mixture Allow it to stand with occasional shaking during twenty-four hours, if convenient, and filter.

4 Cc. (1 fluidrachm) represent about 0.61 Gm. (9½ grains) of Damiana.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR VIBURNI OPULI COMPOSITUM.

Compound Elixir of Viburnum Opulus.

Compound Elixir of Crampbark.

	Metric.	*Apothecaries'.*
Fluidextract of Viburnum Opulus (U. S. P.)	75 Cc.	2½ fluidounces.
Fluidextract of Trillium (N. F.)	150 Cc.	5 fluidounces.
Fluidextract of Aletris (N. F.)	75 Cc.	2½ fluidounces.
Compound Elixir of Taraxacum (N. F.)	700 Cc.	22 fluidounces.

Mix them. Allow the mixture to stand a few days, if convenient, and filter

4 Cc. (1 fluidrachm) represent about 0.3 Gm. (4¾ grains), each, of Viburnum Opulus and Aletris, and 0.61 Gm. (9½ grains) of Trillium.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR VIBURNI PRUNIFOLII.

Elixir of Viburnum Prunifolium.

Elixir of Black Haw.

	Metric.	*Apothecaries'.*
Fluidextract of Viburnum Prunifolium (U.S.P.)	125 Cc.	4 fluidounces.
Compound Tincture of Cardamom (U. S. P.)	75 Cc.	2½ fluidounces.
Aromatic Elixir (U. S. P.)	800 Cc.	25½ fluidounces.

Mix them. Allow the mixture to stand a few days, if convenient, and filter.

4 Cc. (1 fluidrachm) represent about 0.5 Gm. (7½ grains) of Viburnum Prunifolium.

Average dose: 4 Cc. (1 fluidrachm).

ELIXIR ZINCI VALERIANATIS.

Elixir of Zinc Valerianate.

	Metric.	*Apothecaries'.*
Zinc Valerianate	17.5 Gm.	256 grains.
Stronger Solution of Ammonium Citrate (N. F.)	100 Cc.	3 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Spirit of Bitter Almond (U. S. P.)	10 Cc.	150 minims.
Compound Tincture of Cudbear (N. F.)	15 Cc.	½ fluidounce.
Aromatic Elixir (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Stronger Solution of Ammonium Citrate with 250 Cc. (or 8 fluidounces) of the Elixir and the Alcohol, and triturate the Zinc Valerianate with this mixture, added gradually and in portions, until solution has been effected. Then add the Spirit of Bitter Almond, the Compound Tincture of Cudbear, and finally, enough Elixir to make 1000 Cc. (or 32 fluidounces). Allow the mixture to stand a few days, if convenient, and filter.

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Zinc Valerianate.

Average dose: 4 Cc. (1 fluidrachm).

EMPLASTRUM AROMATICUM.

Aromatic Plaster.

Spice Plaster.

Cloves	10 parts.
Cinnamon, Saigon	10 parts.
Ginger	10 parts.
Capsicum	5 parts.
Camphor	5 parts.
Cotton Seed Oil	35 parts.
Lead Plaster	25 parts.

Melt together the Lead Plaster and Cotton Seed Oil, with the aid of heat. Cool the mixture and, while it is still soft, thoroughly incorporate with it the aromatic ingredients, previously reduced to a very fine powder.

EMPLASTRUM FUSCUM CAMPHORATUM.

Camphorated Brown Plaster.

Emplastrum Matris Camphoratum; Camphorated Mother Plaster.

Red Oxide of Lead	30 parts.
Olive Oil	60 parts.
Yellow Wax	15 parts.
Camphor	1 part.

Triturate the Red Oxide of Lead with a portion of the Oil in a capacious copper kettle until a smooth paste results. Then add the remainder of the Oil, excepting a small quantity required for trituration with the Camphor, and boil the whole over a naked fire, with constant stirring, until gas bubbles rise, or until the red color of the mixture begins to turn brown. Then moderate the heat, but keep up the stirring until the mixture has acquired a dark-brown color, and from time to time allow some drops of it to fall into cold water to test its consistence. When this is satisfactory, remove the vessel from the fire, add the Wax in small pieces, and finally the Camphor, previously rubbed to a smooth paste with a little Olive Oil. Mix thoroughly, allow the mixture to become somewhat cool, and while it is still warm, pour the plaster into paper-moulds previously coated with mucilage containing about five per cent. of glycerin, and dried.

Note.—This preparation is official in the *German Pharmacopœia.*

EMPLASTRUM PICIS LIQUIDÆ COMPOSITUM.

Compound Tar Plaster.

Resin	5 parts.
Tar	4 parts.
Podophyllum, in No. 80 powder	1 part.
Phytolacca Root, in No. 80 powder	1 part.
Sanguinaria, in No. 80 powder	1 part.

Melt the Resin and the Tar together, then stir in the mixed powders, and as the mass cools, mould it into rolls, or pour it into boxes.

EMULSA.

Emulsions.

The successful formation of Emulsions, whether of fixed or volatile Oils, is most satisfactorily and expeditiously accomplished with Acacia as the emulsifying agent. Hence, preference is given Acacia in this Formulary, though other emulsifying agents are not ignored, and their use and application is exemplified in a number of alternative formulas for preparing Emulsion of Cod-Liver Oil.

A. *Emulsification.* When Acacia is used as the emulsifying agent, it is important that the Oil, the Acacia, and the Water, shall primarily be in absolutely definite proportion to each other *by weight* This proportion is *eight* (8) *parts* of Oil, *two* (2) *parts* of Acacia, and *three* (3) *parts* of Water. The Oil (8) and Acacia (2), in fine powder, are weighed into a mortar, and well mixed by trituration; the Water (3) is then added *in one portion*, and the whole is triturated briskly until a thick, creamy emulsion is produced, the sides of the mortar being carefully scraped, and the mixture again triturated so as to insure the complete emulsification of all the Oil. During warm weather, the Water and Oil should be cooled. The other ingredients may then be gradually added; first the flavoring, then the greater part of the Water necessary to make the final quantity, then the Syrup, etc. Finally, the quantity is adjusted by the addition of sufficient Water.

Alcoholic liquids should be added last, and should be previously mixed with a portion of the Water.

If these simple conditions and directions are carefully observed, and particularly if the proportions by weight are accurate, a perfect Emulsion is obtained with certainty and rapidity.

With other emulsifying agents—Mucilage of Irish Moss, Mucilage of Dextrin, Glycerite of Yolk of Egg—the proportions need not be adjusted with the same minuteness. It suffices to place the emulsifier into a bottle or mortar, and to add the oil in small portions at a time, shaking or triturating briskly after each addition until emulsification is completed. Obviously, the preparation of this class of emulsions is very much facilitated by mechanical contrivances that are capable of producing brisk agitation and mingling of the two fluids, and such are necessarily resorted to, when emulsions are to be made in large quantities for the market. But none of them are as perfect as the emulsions made with Acacia.

B. *Flavoring.* Since no single or compound aromatic can be devised which would be acceptable under all circumstances as a flavoring for Emulsion of Cod-Liver Oil, the selection of the most suitable aromatic must be left to the prescriber or dispenser. Among those which are

found to be most serviceable are the following, the quantities given below being intended for 1000 Cc. (or 32 fluidounces) of finished emulsion, though in some cases a smaller or a larger quantity, in the same proportions, may be preferable:

		Metric.	*Apothecaries'.*
a.	Oil of Gaultheria	4 Cc.	60 minims.
b.	Oil of Gaultheria	2 Cc.	30 minims.
	Oil of Sassafras	2 Cc.	30 minims.
c.	Compound Spirit of Orange (U. S. P.)	1.5 Cc.	25 minims.
d.	Oil of Gaultheria	2 Cc.	30 minims.
	Oil of Bitter Almond	0.25 Cc.	4 minims.
	Oil of Coriander	0.25 Cc.	4 minims.
e.	Oil of Gaultheria	1.5 Cc.	25 minims.
	Oil of Sassafras	1.5 Cc.	25 minims.
	Oil of Bitter Almond	0.25 Cc.	4 minims.
f.	Oil of Gaultheria	2.5 Cc.	40 minims.
	Oil of Bitter Almond	2.5 Cc.	40 minims.
g.	Oil of Neroli	1.5 Cc.	25 minims.
	Oil of Bitter Almond	1.5 Cc.	25 minims.
	Oil of Cloves	0.25 Cc.	4 minims.

C. *Preservation.* When an Emulsion of Cod-Liver Oil is to be kept for some time, its deterioration may be prevented or retarded by the addition of 65 Cc. (or 2 fluidounces) of Alcohol in the place of the same quantity of Water, when making 1000 Cc. (or 32 fluidounces) of Emulsion.

EMULSA SYMBOLICA.

Typical Emulsions.

In order to exemplify the application of the different emulsifying agents to the preparation of Emulsions, the following formulas and processes are here given as applied to Cod-Liver Oil:

1. Acacia Emulsion of Cod-Liver Oil.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	464 Gm.	15 troy ounces.
Acacia, in fine powder	116 Gm.	3¾ troy ounces.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Oil and Acacia together in a mortar. Carefully weigh out 174 Gm. (or 5⅝ troy ounces) of water, and add it *at once* to the mixture of Oil and Acacia, triturating briskly until a thick creamy emulsion is produced. To this add the desired Flavoring, the Syrup,

and enough Water, to make 1000 Cc. (or 32 fluidounces) of finished Emulsion.

Note.—The completion of perfect emulsification by this process is recognized by a peculiar crackling sound, accompanied by the rapid thickening of the ingredients into a white, creamy liquid, which is readily diluted with water to a milky fluid, free from visible oil-globules.

2. Irish Moss Emulsion of Cod-Liver Oil.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	500 Cc.	16 fluidounces.
Mucilage of Irish Moss (N. F.)	325 Cc.	10 fluidounces.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Pour the Mucilage of Irish Moss into a suitable bottle, add the Cod-Liver Oil in divided portions, shaking well after each addition, and, when a perfect Emulsion is formed, add the Syrup of Tolu, and Flavoring, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces). Finally, mix the whole thoroughly together.

3. Glyconin Emulsion of Cod-Liver Oil.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	500 Cc.	16 fluidounces.
Glycerite of Yolk of Egg (N. F. Appendix)	175 Cc.	5 fluidounces.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Glycerite of Yolk of Egg (Glyconin) in a mortar with the Oil, added in small portions at a time, and thoroughly incorporate each portion before adding the next. Then, continuing the trituration, gradually add the Syrup of Tolu, and Flavoring. Finally add enough Water to make 1000 Cc. (or 32 fluidounces), and mix the whole thoroughly together.

4. Dextrin Emulsion of Cod-Liver Oil.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	500 Cc.	16 fluidounces.
Mucilage of Dextrin (N. F.)	325 Cc.	10 fluidounces.
Syrup of Tolu (U. S. P.)	125 Cc.	4 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

To the Mucilage of Dextrin contained in a suitable bottle add the Cod-Liver Oil, first in small portions, agitating each time, until the last added portion is emulsified. Then add the Flavoring, the Syrup of Tolu, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces), and mix the whole thoroughly together.

5. Emulsions of Volatile Oils.

Although Volatile Oils are readily emulsionized by themselves, the addition of a small portion of some bland fixed oil, such as Expressed Oil of Almond, is an advantage. Usually about 1 volume of the Fixed Oil will be sufficient for 2 volumes of the Volatile Oil, as exemplified in the following:

	Metric.	*Apothecaries'.*
Volatile Oil	10 Gm.	150 grains.
Expressed Oil of Almond	6 Gm.	90 grains.
Acacia, in fine powder	4 Gm.	60 grains.
Syrup (U. S. P.)	25 Cc.	6 fluidrachms.
Water, a sufficient quantity		
To make	100 Cc.	3 fluidounces.

Weigh the Oils carefully into a mortar, add the Acacia, and triturate them thoroughly together; then add 6 Gm. (or 90 grains) of Water, carefully weighed, and triturate briskly until a creamy emulsion is produced. To this add the Syrup, and sufficient Water to make 100 Cc. (or 3 fluidounces) of Emulsion.

EMULSUM OLEI MORRHUÆ CUM CALCII ET SODII PHOSPHATIBUS.

Emulsion of Cod-Liver Oil with Calcium and Sodium Phosphates.

Emulsion of Cod-Liver Oil with Phosphates of Lime and Soda.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	464 Gm.	15 troy ounces.
Acacia, in fine powder	116 Gm.	3¾ troy ounces.
Calcium Phosphate	17.5 Gm.	½ troy ounce.
Sodium Phosphate	17.5 Gm.	½ troy ounce.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Emulsify the Oil with the Acacia, and 174 Gm. (or 5⅝ troy ounces) of Water, as directed under Acacia Emulsion of Cod-Liver Oil (p. 47), and add the Flavoring. Then triturate the Salts to a fine powder, incorporate with the Syrup and a portion of the remaining Water, and

triturate with the emulsified Oil. Finally, add enough Water to make 1000 Cc. (or 32 fluidounces) and mix the whole thoroughly together.

Average dose: 16 Cc. (4 fluidrachms).

EMULSUM OLEI MORRHUÆ CUM CALCII LACTOPHOSPHATE.

Emulsion of Cod-Liver Oil with Calcium Lactophosphate.

Emulsion of Cod-Liver Oil with Lactophosphate of Lime.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	464 Gm.	15 troy ounces.
Acacia, in fine powder	116 Gm.	3¾ troy ounces.
Calcium Lactate	35 Gm.	1 troy ounce.
Phosphoric Acid (U. S. P. 85%)	20 Gm.	300 grains.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Emulsify the Oil with the Acacia, and 174 Gm. (or 5⅝ troy ounces) of Water, as directed under Acacia Emulsion of Cod-Liver Oil (p. 47), and add the Flavoring. Then dissolve the Calcium Lactate in 65 Cc. (or 2 fluidounces) of Water with the aid of the Phosphoric Acid, add the solution gradually to the Emulsified Oil, then the Syrup, and lastly enough Water to make 1000 Cc. (or 32 fluidounces.) Mix the whole thoroughly.

This Emulsion should be freshly prepared when dispensed.

Average dose: 16 Cc. (4 fluidrachms.)

EMULSUM OLEI MORRHUÆ CUM CALCII PHOSPHATE.

Emulsion of Cod-Liver Oil with Calcium Phosphate.

Emulsion of Cod-Liver Oil with Phosphate of Lime.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	464 Gm.	15 troy ounces.
Acacia, in fine powder	116 Gm.	3¾ troy ounces.
Calcium Phosphate	35 Gm.	1 troy ounce.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Emulsify the Oil with the Acacia and 174 Gm. (or 5⅝ troy ounces) of Water, as directed under Acacia Emulsion of Cod-Liver Oil (p. 47),

and add the Flavoring. Then triturate the Calcium Phosphate with the Syrup and a portion of the remaining Water, add the mixture gradually to the emulsified Oil, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces). Mix the whole thoroughly.

Average dose: 16 Cc. (4 fluidrachms).

EMULSUM OLEI MORRHUÆ CUM EXTRACTO MALTI.

Emulsion of Cod-Liver Oil with Extract of Malt.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	500 Cc.	16 fluidounces.
Mucilage of Dextrin (N. F.)	125 Cc.	4 fluidounces.
Extract of Malt (U. S. P.)	375 Cc.	12 fluidounces.

To the Mucilage of Dextrin contained in a suitable bottle, add the Extract of Malt, and mix them thoroughly by agitation. Then gradually add the Cod-Liver Oil, first in small portions, agitating each time until the last-added portion is perfectly incorporated.

Average dose: 16 Cc. (4 fluidrachms).

EMULSUM OLEI MORRHUÆ CUM PRUNO VIRGINIANA.

Emulsion of Cod-Liver Oil with Wild Cherry.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	464 Gm.	15 troy ounces.
Acacia, in fine powder	116 Gm.	3¾ troy ounces.
Fluidextract of Wild Cherry (U. S. P.)	65 Cc.	2 fluidounces.
Syrup of Tolu (U. S. P.)	100 Cc.	3 fluidounces.
Flavoring (see B, under Emulsa), to suit.		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Emulsify the Oil with the Acacia, and 174 Gm. (or 5⅜ troy ounces) of Water, as directed under Acacia Emulsion of Cod-Liver Oil (p. 47), and add the Flavoring. Mix the Fluidextract and the Syrup with a portion of the remaining Water, and add the mixture gradually to the emulsified Oil. Lastly, add enough Water to make 1000 Cc. (or 32 fluidounces), and mix the whole thoroughly.

Average dose: 16 Cc. (4 fluidrachms).

EMULSUM OLEI RICINI.

Emulsion of Castor Oil.

	Metric.	Apothecaries'.
Castor Oil	32 Gm.	440 grains.
Acacia, in fine powder	8 Gm.	110 grains.
Tincture of Vanilla (U. S. P.)	2.5 Cc.	40 minims.
Syrup (U. S. P.)	20 Cc.	5 fluidrachms.
Water, a sufficient quantity		
To make	100 Cc.	3 fluidounces.

Carefully weigh the Castor Oil and the Acacia into a mortar, triturate until well mixed; carefully weigh out 12 Gm. (or 165 grains) of Water, and add *at once* to the mixture of Oil and Acacia, triturating briskly until a thick, creamy emulsion is produced. To this add gradually, with stirring, a mixture of the Syrup and Tincture with a portion of the remaining Water, and finally enough Water to make 100 Cc. (or 3 fluidounces).

The Emulsion contains about *one-third* (⅓) of its volume of Castor Oil. The flavoring may be varied to suit prescription. It should be freshly prepared as required.

Average dose: 48 Cc. (1½ fluidounces).

EMULSUM OLEI TEREBINTHINÆ FORTIOR.

Stronger Emulsion of Oil of Turpentine.

Forbes' Emulsion of Oil of Turpentine.

	Metric.	Apothecaries'.
Oil of Turpentine	50 Cc.	1¼ fluidounces.
Acacia, in fine powder	2.5 Gm.	38 grains.
Water	50 Cc.	1¼ fluidounces.

Pour the Oil of Turpentine into a perfectly dry vial, having a capacity of a little more than 100 Cc. (or 3 fluidounces), and shake so that the inner surface may be completely wetted by the Oil. Then add the Acacia, and shake again. Now add one-half of the Water, and shake until the Oil separates in form of a milky Emulsion. Add the remainder of the Water, and continue the shaking until the Oil separates from the Water in the form of a creamy Emulsion upon standing.

This Emulsion must be shaken before dispensing.

Average dose: 2 Cc. (½ fluidrachm).

Note.—The formula for this strong Emulsion of Oil of Turpentine is essentially that proposed by Mr. J. Winchell Forbes, in 1872. While the Oil separates in the form of a cream-like layer upon standing, the two liquids are easily united by brief shaking. It keeps well, and is useful for dispensing small quantities of Oil of Turpentine in a fairly well emulsified condition.

EMULSUM PETROLEI.

Emulsion of Petroleum

	Metric.	*Apothecaries'.*
Petrolatum Album (U. S. P.)	50 Gm.	1½ troy ounces.
Expressed Oil of Almond	250 Gm.	7½ troy ounces.
Acacia, in fine powder	50 Gm.	1½ troy ounces.
Tragacanth, in fine powder	25 Gm.	360 grains.
Syrup (U. S. P.)	100 Cc.	3 fluidounces.
Tincture of Lemon Peel (U. S. P.)	15 Cc.	230 minims.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Melt the Petrolatum and mix it thoroughly with the Almond Oil. Mix the Acacia and Tragacanth, in a capacious mortar, with 150 Cc. (or 4¾ fluidounces) of Water, and add the oil mixture gradually, triturating rapidly until a smooth Emulsion is formed. To this add the Syrup and Tincture, and enough Water to make 1000 Cc. (or 32 fluidounces), and mix it well.

Average dose: 16 Cc. (4 fluidrachms).

EMULSUM PHOSPHATICUM.

Phosphatic Emulsion.

Mistura Phosphatica.

	Metric.	*Apothecaries'.*
Cod-Liver Oil	250 Cc.	8 fluidounces.
Glycerite of Yolk of Egg (N. F. Appendix)	165 Gm.	5 fluidounce.
Diluted Phosphoric Acid (U. S. P.)	50 Cc.	1½ fluidounces.
Oil of Bitter Almond	1.5 Cc.	25 minims.
Jamaica Rum	250 Cc.	8 fluidounces.
Orange Flower Water (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

To the Glycerite of Yolk of Egg (Glyconin) contained in a suitable bottle, gradually add the Cod-Liver Oil, in small portions at a time, shaking after each addition, until the added portion is emulsified. Then gradually add the Phosphoric Acid, Rum, and Oil of Bitter Almond, incorporating them thoroughly. Finally, add enough Orange Flower Water to make 1000 Cc. (or 32 fluidounces), and mix the whole thoroughly.

Average dose: 16 Cc. (4 fluidrachms).

ESSENTIA PEPSINI.

Essence of Pepsin.

	Metric.	*Apothecaries'.*
Pepsin (U. S. P.)	22.5 Gm.	328 grains.
Rennin (see Note)	16.5 Gm.	240 grains.
Lactic Acid (U. S. P.)	2. Cc.	30 minims.
Tincture of Sweet Orange Peel (U. S. P.)	10. Cc.	150 minims.
Glycerin	125. Cc.	4 fluidounces.
Alcohol	50. Cc.	1½ fluidounces.
Syrup (U. S. P.)	65. Cc.	2 fluidounces.
White Wine (Angelica)	365. Cc.	12 fluidounces.
Purified Talc	15. Gm.	½ troy ounce.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Pepsin and Rennin with 300 Cc. (or 10 fluidounces) of Water, add the Lactic Acid, and agitate until solution is effected. Then add the Glycerin, Syrup, Alcohol, Tincture and Wine, in the order named, shaking after each addition, followed by sufficient water to make 1000 Cc. (or 32 fluidounces). Incorporate the Purified Talc, and shake the mixture occasionally for twenty-four hours; then filter, returning the first portions until the filtrate passes perfectly clear.

Average dose: 8 Cc. (2 fluidrachms).

Note.—Rennin is a milk-curdling enzyme prepared from calves' rennets.

EXTRACTUM FERRI POMATUM.

Ferrated Extract of Apples.

Ferri Malas Crudas. Crude Malate of Iron.

	Metric.	*Apothecaries'.*
Iron, in the form of fine, bright wire, and cut	20 Gm.	300 grains.
Ripe Sour Apples	1000 Gm.	32 troy ounces.
Water, a sufficient quantity.		

Convert the Sour Apples into a homogeneous pulp by pounding or grinding, and express the liquid portion. Then mix the latter with the Iron in an enameled or porcelain vessel, macerate for forty-eight hours, and then apply the heat of a water-bath, until no more bubbles of gas are given off, adding a little water from time to time to make up any loss by evaporation. Dilute the liquid with Water to make it weigh 1000 Gm. (or 32 troy ounces), and set it aside for a few days. Then filter, and evaporate the filtrate in the before-mentioned vessel to a thick extract, which should be greenish-black, and should yield a clear solution with water.

Average dose: 0.65 Gm. (10 grains).

Note.—This preparation is inserted here with the title under which it is contained in the German Pharmacopœia. In some others it is called more correctly, *Extractum Pomi* (or *Pomorum*) *Ferratum.*

EXTRACTUM GLYCYRRHIZÆ DEPURATUM.

Purified Extract of Glycyrrhiza.

Purified Extract of Licorice.

Extract of Glycyrrhiza, in sticks,
Water, each a sufficient quantity.

Put a layer of well-washed straw over the bottom of a keg or other suitable tall vessel. Then put a single layer of sticks of Extract of Glycyrrhiza, broken into coarse pieces, over it. Continue to put in alternate layers of straw and Extract of Glycyrrhiza until the vessel is full or the whole of the Extract has been disposed of. Fill the vessel with cold Water, and allow it to remain for three days. Then draw off the solution which has formed, by means of a faucet, or siphon, or otherwise, refill the vessel with cold Water, and proceed as before. Mix the several solutions obtained, allow any suspended matter to subside, decant the clear solution, and strain the remainder without pressure. Finally, evaporate the liquid on a water-bath to the consistence of a pilular extract.

Average dose: 1 Gm. (15 grains).

Note.—Purified Extract of Glycyrrhiza should not be confounded with the official Pure Extract of Glycyrrhiza (*Extractum Glycyrrhizæ Purum*).

FERRI HYPOPHOSPHIS.

Hypophosphite of Iron.

Ferric Hypophosphite.

	Metric.	*Apothecaries'.*
Ferric Ammonium Sulphate (U. S. P.) in perfect crystals	100 Gm.	3 troy ounces.
Sodium Hypophosphite	67 Gm.	2 troy ounces.
Distilled Water, a sufficient quantity.		

Dissolve the Ferric Ammonium Sulphate in 400 Cc. (or 12 fluidounces), and the Sodium Hypophosphite in 125 Cc. (or 4 fluidounces) of Distilled Water, and, if necessary, filter each solution. Then mix them, and stir thoroughly; after a short time transfer the mixture to a close linen or muslin strainer, and wash the precipitate with Distilled Water, until the washings run off tasteless. Transfer the strainer to a warm place and, when the contents are dry, preserve them for use.

Average dose: 0.2 Gm. (3 grains).

Note.—Theoretically, 100 Gm. (or 3 troy ounces) of Ferric Ammonium Sulphate

and 67 Gm. (or 2 troy ounces) of Sodium Hypophosphite, will yield 51.9 Gm. (or 993 grains) of Ferric Hypophosphite.

Ferric Hypophosphite is rendered soluble in Water, by mixing it with about an equal weight of Potassium Citrate, or some other Alkali Citrate.

FLUIDEXTRACTA.

Fluidextracts.

The Fluidextracts for which formulas are given in this Formulary are intended to be of the same strength as the Fluidextracts of the United States Pharmacopœia, which requires that *one (1) cubic centimeter* of Fluidextract shall be obtained for each *one (1) gramme* of drug used. This simple relation, however, becomes changed when we convert Metric into Apothecaries' values; for, while the ponderable value of a *gramme* and a *cubic centimeter* of water are identical, viz., *15.432 grains troy*, a fluidounce of water, or 480 minims, weighs only 456.392 grains, whereas a troy ounce of water weighs 480 grains. Hence a grain of water will measure 1.0517 minims and a minim of water will weigh 0.9508 grain; a gramme of water will weigh 15.432 grains, but will measure 16.230 minims. It follows that this difference, which amounts to 5 per cent., must be taken into account if it is aimed to make the formulas in the two systems interchangeable, the values being respectively as follows:

1000 Cc. (16230 minims) contain 15432 grains or 32 troy ounces.

32 fluidounces (15360 minims) contain 14600 grains or 30.4 troy ounces.

These figures justify the acceptance of 30½ troy ounces of Drug in 32 fluidounces of Fluidextract as the equivalent of 1000 Gm. of Drug in 1000 Cc. of Fluidextract.

General Processes.

The Fluidextracts of this Formulary are to be prepared, in general, according to one of the two following processes, the particular one to be employed being designated in each case. These two processes are necessary because, in the preparation of some Fluidextracts, two fluids are successively used, the first containing Glycerin, and being in definite proportion to the drug used, while the second is free from Glycerin, being intended for the exhaustion of the drug and subsequent evaporation. Accordingly, these menstrua are designated as *Menstruum I* (containing Glycerin) and *Menstruum II* (containing no Glycerin).

Process A. The Menstruum contains no Glycerin.

Moisten 1000 Gm. (or 30½ troy ounces) of the drug with a sufficient quantity of the prescribed menstruum to render it distinctly damp and

to maintain it so after several hours' maceration in a well-covered vessel. When the drug has ceased to swell, pack it in a suitable percolator, pour a sufficient quantity of the menstruum on top, and, when the percolator begins to drop from the orifice, close the latter, cover the percolator, and allow the contents to macerate twenty-four hours. Then permit the percolation to proceed. Receive the first 875 Cc. (or 28 fluidounces) of the percolate separately and set it aside. Then continue the percolation with the same menstruum until the drug is practically exhausted. Evaporate this second portion—at a temperature sufficiently low to prevent the loss of any important volatile constituent—to a soft extract, and dissolve this in a sufficient quantity of menstruum so that when this is added to the reserved portion, the product will measure 1000 Cc. (or 32 fluidounces). Allow the Fluidextract to stand a few days, or longer, if convenient, and filter, if necessary.

Process B. The Menstruum contains Glycerin.

Moisten 1000 Gm. (or 30½ troy ounces) of the drug with a sufficient quantity of Menstruum I to render it distinctly damp and to maintain it so after several hours' maceration in a well-covered vessel. When the drug has ceased to swell, pack it in a suitable percolator and pour the remainder of Menstruum I on top. When this has just disappeared from the surface, follow it by a sufficient quantity of Menstruum II. As soon as the percolate begins to drop from the orifice, close the latter, cover the percolator, and allow the contents to macerate during twenty-four hours. Then permit the percolation to proceed. Receive the first 850 Cc. (or 27 fluidounces) of the percolate separately and set it aside. Then continue the percolation with Menstruum II, until the drug is practically exhausted. Evaporate this second portion—at a temperature sufficiently low to prevent the loss of any important, volatile constituent—to a soft extract, and dissolve this in a sufficient quantity of Menstruum II, so that when this is added to the reserved portion, the product will measure 1000 Cc. (or 32 fluidounces). Allow the Fluidextract to stand a few days, or longer, if convenient, and filter, if necessary.

Alternative Process.

As an alternative to either Process *A* or *B*, a third process, dependent upon *Fractional Percolation*, may be used. In this the use of heat is avoided, and it involves the use of only one kind of menstruum, even in the case of drugs for which two different menstrua (I and II) are prescribed in this Formulary. In the case of the latter, a sufficient quantity of Menstruum I must be prepared to serve throughout the process. Moreover, to compensate for some inevitable loss of extractive matter, remaining in the last fractions of drug, 32 troy ounces of the

Drug are in this Alternative Process directed to make 32 fluidounces of finished Fluidextract.

Process C. Fractional Percolation.

Take of the Drug, in powder of the prescribed fineness, 1000 Gm. (or 32 troy ounces), and divide it into three portions, of 500 Gm. (or 16 troy ounces), 325 Gm. (or 10 troy ounces), and 175 Gm. (or 6 troy ounces), respectively.

Moisten the first portion of the drug (500 Gm. or 16 troy ounces) with the prescribed menstruum and percolate in the usual manner. Set aside the first 175 Cc. (or 6 fluidounces of percolate, and continue until 1500 Cc. (or 48 fluidounces) of percolate have passed, which must be received in several portions, so that the more concentrated will be separate from the last, weak percolate.

Moisten the second portion of the drug (325 Gm. or 10 troy ounces) with the more concentrated percolates received during the preceding operation (after the reserved portion), and percolate again in the usual manner, using the several percolates, in the order received, as menstrua. Set aside the first 325 Cc. (or 10 fluidounces), and continue the percolation as before, until 650 Cc. (or 20 fluidounces) are received, in several portions.

Moisten the third portion of the drug (175 Gm. or 6 troy ounces) with the most concentrated of the last percolates, and proceed as directed for the second portion. Collect 500 Cc. (or 16 fluidounces) of percolate, and mix this with the two portions (325 and 175 Cc , or 10 and 6 fluidounces) previously set aside, so as to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM ADONIDIS.

Fluidextract of Adonis.

From the root of *Adonis vernalis* Linné (Bird's Eye).

Process A (see p. 56).—No. 60 powder.

Menstruum : Alcohol.

Average dose : 0.13 Cc. (2 minims).

FLUIDEXTRACTUM ALETRIDIS.

Fluidextract of Aletris.

From the rhizome of *Aletris farinosa* Linné (Stargrass).

Process A (see p. 56).—No. 60 powder.

Menstruum : Diluted Alcohol.

Average dose : 2 Cc. (30 minims).

FLUIDEXTRACTUM ANGELICÆ RADICIS.

Fluidextract of Angelica Root.

From the root of *Angelica Archangelica* Linné (Angelica).
Process A (see p. 56).—No. 60 powder.
Menstruum · Alcohol, 3 volumes.
Water, 2 volumes.
Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM APII GRAVEOLENTIS.

Fluidextract of Celery.

From the seed of *Apium graveolens* Linné (Celery).
Process A (see p. 56).—No. 60 powder.
Menstruum: Alcohol, 2 volumes.
Water, 1 volume.
Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM ARALIÆ RACEMOSÆ.

Fluidextract of Aralia Racemosa.

From the root of *Aralia racemosa* Linné (American Spikenard).
Process A (see p. 56) —No. 60 powder.
Menstruum: Alcohol, 2 volumes.
Water, 1 volume.
Average dose: 2 Cc. (30 minims.)

FLUIDEXTRACTUM ARNICÆ FLORUM.

Fluidextract of Arnica Flowers.

From the flower heads of *Arnica montana* Linné (Arnica).
Process A (see p. 56).—No. 40 powder.
Menstruum: Diluted Alcohol.
Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM BOLDI.

Fluidextract of Boldo.

From the leaves of *Peumus Boldus* Molina (Boldo).
Process A (see p. 56 .—No. 60 powder.
Menstruum: Alcohol, 2 volumes.
Water, 1 volume.
Average dose: 0.5 Cc. (8 minims).

FLUIDEXTRACTUM BUCHU COMPOSITUM.

Compound Fluidextract of Buchu.

	Metric.	*Apothecaries'.*
Buchu	625 Gm.	19½ troy ounces.
Cubeb	125 Gm.	3¾ troy ounces.
Juniper	125 Gm.	3¾ troy ounces.
Uva Ursi	125 Gm.	3¾ troy ounces.

Process A (see p. 56).—No. 40 powder.
Menstruum: Alcohol, 2 volumes.
Water, 1 volume.
Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM CALENDULÆ.

Fluidextract of Calendula.

From the flowering herb of *Calendula officinalis* Linné (Marigold).
Process A (see p. 56).—No. 40 powder.
Menstruum: Alcohol, 2 volumes.
Water, 1 volume.
Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM CAMELLIÆ.

Fluidextract of Camellia.

From the commercial dried leaves of *Camellia Thea* Link (Tea).
Process B (see p. 57).—No. 40 powder.
Menstruum I: Alcohol, 250 Cc. (or 8 fluidounces).
Water, 685 Cc. (or 22 fluidounces).
Glycerin, 65 Cc. (or 2 fluidounces).
Menstruum II: Alcohol, 1 volume.
Water, 3 volumes.
Average dose: 2 Cc. (30 minims).

Note.—It is recommended that the best quality of commercial black tea, preferably "Formosa Oolong," be employed for this preparation.

FLUIDEXTRACTUM CAULOPHYLLI.

Fluidextract of Caulophyllum.

From the rhizome and rootlets of *Caulophyllum thalictroides* Michaux (Blue Cohosh).
Process A (see p. 56).—No. 60 powder.
Menstruum: Alcohol, 3 volumes.
Water, 1 volume.
Average dose: 0.5 Cc. (8 minims).

FLUIDEXTRACTUM COFFEÆ TOSTÆ.

Fluidextract of Roasted Coffee.

From the commercial roasted seeds of *Coffea arabica* Linné (Coffee).

Process B (see p. 57).—No. 20 powder.

Menstruum I: Alcohol, 250 Cc. (or 8 fluidounces).
Water, 685 Cc. (or 22 fluidounces).
Glycerin, 65 Cc. (or 2 fluidounces).

Menstruum II: Alcohol, 1 volume.
Water, 3 volumes.

Average dose: 2 Cc. (30 minims).

Note.—It is recommended that the best quality of either of the commercial varieties known as "Java," or "Mocha" Coffee be employed for this preparation.

FLUIDEXTRACTUM COFFEÆ VIRIDIS.

Fluidextract of Green Coffee.

From the commercial, unroasted seeds of *Coffea arabica* Linné (Coffee).

Process B (see p. 57).—No. 20 powder.

Menstruum I: Alcohol, 250 Cc. (or 8 fluidounces).
Water, 685 Cc. (or 22 fluidounces).
Glycerin, 65 Cc. (or 2 fluidounces).

Menstruum II: Alcohol, 1 volume.
Water, 3 volumes.

Average dose: 2 Cc. (30 minims).

Note.—See the note to the preceding.

FLUIDEXTRACTUM CONVALLARIÆ.

Fluidextract of Convallaria Flowers.

From the flowers of *Convallaria majalis* Linné (Lily of the Valley).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 0.5 Cc. (8 minims).

FLUIDEXTRACTUM COPTIS.

Fluidextract of Coptis.

From the rhizome and rootlets of *Coptis trifolia* Salisbury (Goldthread).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM CORNUS.

Fluidextract of Cornus.

From the bark of the root of *Cornus Florida* Linné (Dogwood).

Process B (see p. 57).—No. 60 powder.

Menstruum I: Glycerin, 150 Cc. (or 5 fluidounces).
Diluted Alcohol, 850 Cc. (or 27 fluidounces).

Menstruum II: Diluted Alcohol.

Average dose: 2 Cc. (15 minims).

FLUIDEXTRACTUM CORNUS CIRCINATÆ.

Fluidextract of Cornus Circinata.

From the bark of *Cornus circinata* L'Héritier (Green Osier).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM CORYDALIS.

Fluidextract of Corydalis.

From the tubers of *Dicentra canadensis* De Candolle (Turkey Corn).

Process A (see p. 56).—No. 60 powder.

Menstruum: Alcohol, 3 volumes.
Water, 1 volume.

Average dose: 0.65 Cc. (10 minims).

FLUIDEXTRACTUM COTO.

Fluidextract of Coto.

From Coto bark, derived from an undetermined tree, native of tropical South America.

Process A (see p. 56).—No. 60 powder.

Menstruum: Alcohol, 9 volumes.
Water, 1 volume.

Average dose: 0.3 Cc. (5 minims).

FLUIDEXTRACTUM FUCI.

Fluidextract of Fucus.

From the thallus of *Fucus vesiculosus* Linné (Bladder-wrack).

Process A (see p. 56).—No. 40 powder.

Menstruum: Alcohol, 3 volumes.
Water, 1 volume.

Average dose: 0 65 Cc. (10 minims).

FLUIDEXTRACTUM HELIANTHEMI.

Fluidextract of Helianthemum.

From the herb of *Helianthemum canadense* Michaux (Frost-wort).
Process A (see p. 56).—No. 40 powder.
Menstruum: Diluted Alcohol.
Average dose: 4 Cc. (1 fluidrachm).

FLUIDEXTRACTUM HUMULI.

Fluidextract of Hops.

From the strobiles of *Humulus Lupulus* Linné (Hops).
Process A (see p. 56).—No. 20 powder.
Menstruum: Alcohol, 5 volumes.
Water, 3 volumes.
Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM HYDRANGEÆ.

Fluidextract of Hydrangea.

From the root of *Hydrangea arborescens* Linné (Seven Barks).
Process A (see p. 56).—No. 60 powder.
Menstruum: Alcohol, 3 volumes.
Water, 2 volumes.
Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM JALAPÆ.

Fluidextract of Jalap.

From the tuberous root of *Exogonium Purga* Bentham (Jalap).
Process A (see p. 56).—No. 60 powder.
Menstruum: Alcohol.
Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM JUGLANDIS.

Fluidextract of Juglans.

From the inner bark of the root of *Juglans cinerea* Linné (Butternut).
Process A (see p. 56).—No. 40 powder.
Menstruum: Diluted Alcohol.
Average dose: 4 Cc. (1 fluidrachm).

FLUIDEXTRACTUM JUNIPERI.

Fluidextract of Juniper.

From the fruit of *Juniperus communis* Linné (Juniper).

Process A (see p. 56).—No. 10 powder.

Menstruum: Diluted Alcohol.

Average dose: 4 Cc. (1 fluidrachm).

FLUIDEXTRACTUM KAVÆ.

Fluidextract of Kava.

From the root of *Piper methysticum* Forster (Kava; Kava-kava; Ava).

Process A (see p. 56).—No. 40 powder.

Menstruum: Alcohol, 3 volumes.
Water, 2 volumes.

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM MALTI.

Fluidextract of Malt.

	Metric.	*Apothecaries'.*
Malt	1000 Gm.	32 troy ounces.
Alcohol,		
Water, each, a sufficient quantity.		

Reduce the Malt to a coarse powder, not finer than No. 20. Moisten it with 500 Cc. (or 16 fluidounces) of a mixture of *one* (1) *volume* of Alcohol and *three* (3) *volumes* of Water, and set it aside, well-covered, until it has ceased to swell. Then mix it with as much of the menstruum as it will take up without dripping, pack it uniformly, but without pressure, in a percolator, and add enough of the before-mentioned menstruum to cover it. When the liquid begins to drop from the orifice, close the latter, and allow the contents to macerate during twenty-four hours, adding from time to time more menstruum, if necessary, to keep the malt just covered. Then remove the cork and allow the percolation to proceed until the percolate weighs 750 Gm. (or 24 troy ounces). Set this aside, well-corked, until any suspended matters have been deposited. Then decant the clear liquid and preserve it for use.

Average dose: 8 Cc. (2 fluidrachms).

Note.—The product thus obtained may be regarded as being practically equivalent to the drug in the proportion of minim for grain, the apparent excess of dissolved matters present in the first portions of the percolate being about offset by the soluble matters still remaining in the drug, when the percolation is interrupted.

FLUIDEXTRACTUM MENYANTHIS.

Fluidextract of Menyanthes.

From the leaves of *Menyanthes trifoliata* Linné (Buckbean.—Trifolium fibrinum *G. P.*)

Process A (see p. 56).—No. 20 powder.

Menstruum: Diluted Alcohol.

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM PETROSELINI RADICIS.

Fluidextract of Parsley Root.

From the root of *Petroselinum sativum* Hoffmann (Parsley).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM RHAMNI PURSHIANÆ ALKALINUM.

Bitterless Fluidextract of Cascara Sagrada.

	Metric.	*Apothecaries'.*
Cascara Sagrada, in No. 20 powder	1000 Gm.	30½ troy ounces.
Lime	50 Gm.	1½ troy ounces.
Sugar	400 Gm.	13 troy ounces.
Oil of Coriander	0.8 Cc.	12 minims.
Oil of Anise	0.4 Cc.	6 minims.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Slake the lime and mix with 2000 Cc. (or 64 fluidounces) of water. Stir in the Cascara and digest on a water-bath six hours, or until only a faint bitterness is apparent to the taste. Then transfer the mixture to a percolator and allow to drain. Now pour on water until the Cascara is exhausted. Evaporate the percolate on a water-bath to a volume of 750 Cc. (or 24 fluidounces), and dissolve the Sugar in this fluid. Add the oils and agitate thoroughly. Filter if necessary, and add enough Water to make 1000 Cc. (or 32 fluidounces).

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM STERCULIÆ.

Fluidextract of Sterculia.

From the seeds of *Sterculia acuminata* R. Brown (Cola; Kola).

Process B (see p. 57).—No. 20 powder.

Menstruum I: Alcohol, 250 Cc. (or 8 fluidounces).
Water, 685 Cc. (or 22 fluidounces).
Glycerin, 65 Cc. (or 2 fluidounces).

Menstruum II: Alcohol, 1 volume.
Water, 3 volumes.

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM STILLINGIÆ COMPOSITUM.

Compound Fluidextract of Stillingia.

	Metric.	*Apothecaries'.*
Stillingia	250 Gm.	7¾ troy ounces.
Corydalis	250 Gm.	7¾ troy ounces.
Iris	125 Gm.	3⅞ troy ounces.
Sambucus	125 Gm.	3⅞ troy ounces.
Chimaphila	125 Gm.	3⅞ troy ounces.
Coriander	62 Gm.	900 grains.
Xanthoxylum Berries	62 Gm.	900 grains.

Reduce the drugs to a moderately coarse (No. 40) powder, and prepare a Fluidextract in the usual manner, by the Process and Menstrua below mentioned.

Process B (see p. 57).

Menstruum I: Alcohol, 500 Cc. (or 16 fluidounces).
Glycerin, 250 Cc. (or 8 fluidounces).
Water, 250 Cc. (or 8 fluidounces).

Menstruum II: Diluted Alcohol.

Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM TRILLII.

Fluidextract of Trillium.

From the rhizome of *Trillium erectum* Linné, and other species of *Trillium* (Bethroot).

Process A (see p. 56).—No. 40 powder.

Menstruum: Alcohol, 3 volumes.
Water, 2 volumes.

Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM TURNERÆ.

Fluidextract of Turnera.

From the leaves of *Turnera microphylla* De Candolle, and other species of *Turnera* (Damiana).

Process A (see p. 56).—No. 20 powder.

Menstruum: Alcohol, 2 volumes.
Water, 1 volume.

Average dose: 2 Cc. (30 minims).

FLUIDEXTRACTUM URTICÆ.

Fluidextract of Urtica.

From the root of *Urtica dioica* Linné (Nettle).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM VERBASCI.

Fluidextract of Verbascum.

From the leaves and flowers of *Verbascum Thapsus* Linné (Mullein).

Process A (see p. 56).—No. 20 powder.

Menstruum: Diluted Alcohol.

Average dose: 4 Cc. (1 fluidrachm).

FLUIDEXTRACTUM VERBENÆ.

Fluidextract of Verbena.

From the root of *Verbena hastata* Linné (Vervain).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 1 Cc. (15 minims).

FLUIDEXTRACTUM ZEÆ.

Fluidextract of Zea.

Extractum Stigmatum Maydis Fluidum. Fluidextract of Corn Silk.

From the stigmata of *Zea Mays* Linné (Indian Corn).

Process A (see p. 56).—No. 40 powder.

Menstruum: Diluted Alcohol.

Average dose: 4 Cc. (1 fluidrachm).

GELATINUM CHONDRI.

Irish Moss Gelatin.

	Metric.	*Apothecaries'.*
Irish Moss	1000 Gm.	32 troy ounces.
Water, a sufficient quantity.		

Wash the Irish Moss with cold Water, then place it in a suitable vessel, add 50,000 Cc. (or 1600 fluidounces) of hot Water, and heat it on a boiling water-bath, for fifteen minutes, frequently stirring. Strain the decoction, while hot, through a strong muslin strainer; return the strained, mucilaginous liquid to the water-bath, evaporate it to a semi-fluid consistence, then transfer it to shallow, flat-bottomed trays, and evaporate it at a temperature not exceeding 90° C. (194° F.), so that the Gelatin may become detached in scales.

Note.—Irish Moss Gelatin thus prepared furnishes a Mucilage of Irish Moss which is opaque, like that made directly from the Moss itself. It may be prepared so as to yield a transparent mucilage by following the plan pointed out in the *Note to Mucilago Chondri* (N. F. p. 114).

GLYCERITUM BISMUTHI.

Glycerite of Bismuth.

	Metric.	*Apothecaries'.*
Bismuth Subnitrate	156 Gm.	5 troy ounces.
Nitric Acid (U. S. P.)	148 Cc.	5 fluidounces.
Tartaric Acid	236 Gm.	7½ troy ounces.
Sodium Bicarbonate	266 Gm.	8½ troy ounces.
Glycerin	500 Cc.	16 fluidounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Bismuth Subnitrate in the Nitric Acid diluted with 300 Cc. (or 10 fluidounces) of Distilled Water, and slowly add 600 Cc. (or 20 fluidounces) of Distilled Water to the solution. Now add 118 Gm. (or 3¾ troy ounces) of Tartaric Acid, and then 133 Gm. (or 4¼ troy ounces) of Sodium Bicarbonate. Dilute the magma produced with 1000 Cc. (or 32 fluidounces) of Distilled Water, set the mixture aside for five or six hours, decant the clear supernatant liquid, and wash the residual magma of Bismuth Tartrate with repeated portions of Distilled Water, in the same manner, until all Nitric Acid has been removed; then collect and drain the Bismuth Tartrate on a filter. Mix 133 Gm. (or 4¼ troy ounces) of Sodium Bicarbonate with 300 Cc. (or 10 fluidounces) of Distilled Water, gradually add 118 Gm. (or 3¾ troy ounces) of Tartaric Acid, and warm the mixture slightly to effect complete solution; then transfer the moist Bismuth Tartrate to this solution, and stir until it is

dissolved Filter the solution, add the Glycerin, and evaporate on a water-bath, or add water, as may be necessary, to produce 1000 Cc. (or 32 fluidounces) of Glycerite.

4 Cc. (1 fluidrachm) contain about 1 Gm. (16 grains) of Bismuth and Sodium Tartrate.

Average dose: 0.6 Cc. (10 minims).

GLYCERITUM GUAIACI.

Glycerite of Guaiac.

	Metric.	*Apothecaries'.*
Guaiac (U. S. P.), in powder	85 Gm.	2⅔ troy ounces.
Solution of Potassium Hydroxide (U. S. P.)	65 Cc.	2 fluidounces.
Glycerin	600 Cc.	20 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Solution of Potassium Hydroxide with 300 Cc. (or 10 fluidounces) of Water, add the powdered Guaiac, and macerate for 24 hours with occasional agitation. Then filter, add the Glycerin and sufficient Water to make 1000 Cc. (or 32 fluidounces).

Average dose: 2 Cc. (30 minims).

GLYCERITUM PEPSINI.

Glycerite of Pepsin.

	Metric.	*Apothecaries'.*
Pepsin (U. S. P.)	85 Gm.	2⅔ troy ounces.
Hydrochloric Acid (U. S. P.)	10 Cc.	150 minims.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Glycerin	500 Cc.	16 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Pepsin with 450 Cc. (or 14 fluidounces) of Water and the Hydrochloric Acid, and agitate until solution has been effected. Then incorporate the Purified Talc with the liquid, filter, returning the first portions of the filtrate until it runs through clear, and pass enough Water through the filter to make the filtrate measure 500 Cc. (or 16 fluidounces). To this add the Glycerin, and mix.

4 Cc. (1 fluidrachm) represent 0.34 Gm. (5 grains) of Pepsin (U. S. P.).

Average dose: 3 Cc. (45 minims).

GLYCERITUM PICIS LIQUIDÆ.

Glycerite of Tar.

	Metric.	*Apothecaries'.*
Tar	63 Gm.	2 troy ounces.
Magnesium Carbonate	125 Gm.	4 troy ounces.
Glycerin	250 Cc.	8 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Upon the Tar, contained in a mortar, pour 200 Cc. (or 6 fluidounces) of cold Water, stir them thoroughly together, and pour off the Water. Repeat this once or twice, until the Water only feebly reddens blue litmus-paper. Now triturate the washed Tar with the Alcohol, gradually incorporate the Magnesium Carbonate and Glycerin, and lastly, 625 Cc. (or 20 fluidounces) of Water. Pour the mixture upon a filter of loose texture spread over a piece of straining muslin, and, after the liquid portion has passed through, wash the residue on the filter with Water, until the whole filtrate measures 1000 Cc. (or 32 fluidounces).

Average dose : 4 Cc. (1 fluidrachm).

GLYCERITUM TRAGACANTHÆ.

Glycerite of Tragacanth.

	Metric.	*Apothecaries'.*
Tragacanth, in fine powder	125 Gm.	4 troy ounces.
Glycerin	775 Cc.	25 fluidounces.
Water	185 Cc.	6 fluidounces.

Triturate the Tragacanth with the Glycerin in a mortar, add the Water, and continue the trituration, until a homogeneous, thick paste results.

GLYCEROGELATINA.

Glycerogelatins.

Glycerogelatins are soft masses, melting at the body temperature, composed of Gelatin, Glycerin, Water, and a Medicament suitable for external application in dermatological practice, such as Salicylic Acid, Iodoform, Ichthyol, Resorcinol, Chrysarobin, etc., either by themselves, or with the addition of Zinc Oxide. They were originally suggested by Dr. Unna. The following formulas may serve as types :

1. Glycerogelatinum Acidi Salicylici—10 per cent.

10 per cent. Salicylic Acid Glycerogelatin.

Glycerinated Gelatin (U. S. P.)	20 parts.
Glycerin	35 parts.
Distilled Water	35 parts.
Salicylic Acid, *in very fine powder*	10 parts.

Triturate the Acid with the Glycerin and Water; add the mixture to the previously melted Glycerinated Gelatin, continuing the gentle heat of a water-bath and stirring until a homogeneous mixture is effected. Then pour it into chilled molds or other suitable containers.

2. Glycerogelatinum Iodoformi—10 per cent.

10 per cent. Iodoform Glycerogelatin.

Glycerinated Gelatin (U. S. P.)	10 parts.
Glycerin	15 parts.
Distilled Water	65 parts.
Iodoform, in very fine powder	10 parts.

Melt the Glycerinated Gelatin on the water-bath, at a gentle heat, add 50 parts of Water, and, continuing the heat, a previously prepared mixture of the Iodoform, the Glycerin, and the remainder of the Water. Mix well, and immediately pour the mixture into chilled molds or other suitable containers.

3. Glycerogelatinum Zinci Durum.

Firm Zinc Glycerogelatin.

Glycerinated Gelatin (U. S. P.)	30 parts.
Glycerin	25 parts.
Distilled Water	35 parts.
Zinc Oxide	10 parts.

Melt the Glycerinated Gelatin on the water-bath, at a gentle heat, add 10 parts of Glycerin and the Water, and, continuing the heat, the Zinc Oxide, previously finely levigated with the remainder of the Glycerin. Mix thoroughly, and pour the mixture into chilled molds or other suitable containers.

4. Glycerogelatinum Zinci Molle.

Soft Zinc Glycerogelatin.

May be prepared by omitting, in formula (3) 10 parts of Glycerinated Gelatin and adding 10 parts of Glycerin.

GOSSYPIUM STYPTICUM.

Styptic Cotton.

Purified Cotton (U. S. P.),
Solution of Ferric Chloride (U. S. P.),
Glycerin,
Water, of each, a sufficient quantity.

Mix the liquids in the proportion of *five* (5) *parts* of the Iron Solution, *one* (1) *part* of Glycerin, and *four* (4) *parts* of Water, in such quantities that the Purified Cotton shall be completely immersed in the liquid when gently pressed. Allow the Cotton to remain in the liquid one hour, then remove it, press it until it has been brought to *twice* its original weight, spread it out in thin layers, in a warm place, protected from dust and light, and when it is sufficiently dry, transfer it to well-closed receptacles.

INFUSUM GENTIANÆ COMPOSITUM FORTIUS.

Stronger Compound Infusion of Gentian.

	Metric.	*Apothecaries'.*
Gentian	125 Gm.	4 troy ounces.
Coriander	32 Gm.	1 troy ounce.
Bitter Orange Peel	32 Gm.	1 troy ounce.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the drugs to a moderately coarse (No. 40) powder, moisten it with Diluted Alcohol, pack it in a percolator, and percolate with Diluted Alcohol, until 1000 Cc. (or 32 fluidounces) are obtained.

Average dose: 4 Cc. (1 fluidrachm).

Note.—When *Infusum Gentianæ Compositum* is prescribed, mix 1 volume of this preparation with 3 volumes of water.

INFUSUM ROSÆ COMPOSITUM.

Compound Infusion of Rose.

	Metric.	*Apothecaries'.*
Red Rose	13 Gm.	200 grains.
Diluted Sulphuric Acid (U. S. P.)	9 Cc.	135 minims.
Sugar	40 Gm.	600 grains.
Boiling Water	1000 Cc.	32 fluidounces.

Pour the Boiling Water upon the Red Rose in a glass or porcelain vessel, add the Acid, cover the vessel, and macerate for an hour. Then dissolve the Sugar in the liquid and strain.

IODOFORMUM AROMATISATUM.

Aromatized Iodoform.

Deodorized Iodoform.

Iodoform	96 parts.
Cumarin	4 parts.

Mix them intimately by trituration.

Note.—Should Cumarin not be available, or should it be objectionable to the patient, the odor of Iodoform may also be more or less masked by many essential oils, for instance, those of peppermint, cloves, cinnamon, citronella, bergamot, sassafras, eucalyptus, etc. Another efficient covering agent is freshly-roasted and powdered coffee.

The odor of Iodoform may be removed from the hands or any utensils which it has come in contact with, by washing them with an aqueous solution of tannic acid.

LAC FERMENTATUM.

Fermented Milk.

Kumyss.

	Metric.	*Apothecaries'.*
Cow's Milk, fresh	1000 Cc.	32 fluidounces.
Yeast, semi-liquid	5 Cc.	75 minims.
Sugar	35 Gm.	1 troy ounce.

Dissolve the Sugar in the Milk, contained in a strong bottle, add the yeast, cork the bottle securely, and keep it at a temperature between 23° and 32° C. (73.4° to 89.6° F.), for six hours; then transfer it to a cold place.

Note.—*Compressed Yeast*, 1.5 Gm. (or 24 grains), triturated with a little milk, may be used in place of the semi-liquid yeast. In place of preparing Kumyss with sweet milk, and waiting until it turns sour, the casein may be precipitated at once by the addition of one-third of ready Kumyss to fresh milk. Yeast is not necessary, but Sugar must be added to produce enough Carbonic Acid gas to cause effervescence.

Kumyss may also be made from sour milk, freed from its crusts of cream, by breaking up the curd by vigorous stirring, and causing alcoholic fermentation by addition of Sugar and Yeast. The cream removed may be replaced by sweet cream.

Kephir-Kumyss is prepared by adding active Kephir grains to fresh milk, kept at a temperature of 70° to 80° F., until the effect of fermentation becomes apparent by the rising of the grains to the surface. The grains may then be strained off, and the milk, which now contains enough Yeast-cells to insure continuance of the fermentation, left to itself in well-corked bottles.

LAC HUMANISATUM.

Humanized Milk.

	Metric.	*Apothecaries'.*
Humanizing Milk Powder (N. F.)	6.5 Gm.	100 grains.
Fresh Cows' Milk	62. Cc.	2 fluidounces.
Fresh Sweet Cream	15. Cc.	½ fluidounce.
Water	62. Cc.	2 fluidounces.

Triturate the Milk Powder with the Water; transfer the mixture into a clean bottle containing the Milk and Cream, and immerse the bottle in Water heated to 38° C. (100° F.) for 15 minutes. Then pour the mixture into a vessel, in which heat it quickly to boiling, and then immediately allow it to cool to the body temperature.

Note.—Humanized Milk should be prepared immediately before use. If the above directions are carefully followed, the milk will be well peptonized, and the pancreatin of the Milk Powder rendered sterile.

LINIMENTUM ACONITI ET CHLOROFORMI.

Liniment of Aconite and Chloroform.

	Metric.	*Apothecaries'.*
Fluidextract of Aconite (U. S. P.)	45 Cc.	1½ fluidounces.
Alcohol	80 Cc.	2½ fluidounces.
Chloroform	125 Cc.	4 fluidounces.
Soap Liniment (U. S. P.)	750 Cc.	24 fluidounces.

Mix them.

LINIMENTUM AMMONII IODIDI.

Liniment of Ammonium Iodide.

	Metric.	*Apothecaries'.*
Iodine	4. Gm.	60 grains.
Oil of Rosemary	15 Cc.	½ fluidounce.
Oil of Lavender	15 Cc.	½ fluidounce.
Camphor	32 Gm.	1 troy ounce.
Ammonia Water (U. S. P.)	110 Cc.	3½ fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Iodine, the Oils and the Camphor, in 750 Cc. (or 24 fluidounces) of Alcohol, then add the Ammonia Water, and lastly, enough Alcohol to make 1000 Cc. (or 32 fluidounces).

Note.—On standing, the liquid will become colorless, and there will, usually, be a slight precipitate, which may be separated by filtration.

LINIMENTUM IODI.

Iodine Liniment.

	Metric.	*Apothecaries'.*
Iodine	125 Gm.	4 troy ounces.
Potassium Iodide	50 Gm.	1½ troy ounces.
Glycerin	35 Cc.	1 fluidounce.
Water	65 Cc.	2 fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix 750 Cc. (or 24 fluidounces) of Alcohol with the other ingredients, and dissolve the solids by agitation. Then add enough Alcohol to make 1000 Cc. (or 32 fluidounces).

Note.—The proportion of the ingredients above given yields a product practically identical with that prescribed by the *British Pharmacopœia.*

LINIMENTUM OPII COMPOSITUM.

Compound Liniment of Opium.

Canada Liniment.

	Metric.	*Apothecaries'.*
Tincture of Opium (U. S. P.)	100 Cc.	3 fluidounces.
Camphor	17.5 Gm.	½ troy ounce.
Alcohol	250 Cc.	8 fluidounces.
Oil of Peppermint	25 Cc.	6 fluidrachms.
Ammonia Water (U. S. P.)	375 Cc.	12 fluidounces.
Oil of Turpentine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Camphor and the Oil of Peppermint in the Alcohol, then add the Tincture of Opium, Ammonia Water and enough Oil of Turpentine to make 1000 Cc. (or 32 fluidounces). Shake the mixture, whenever any of it is to be dispensed.

Note.—This Liniment will separate a short time after it has been mixed. It may be made somewhat more permanent by adding 25 Cc. (or 6 fluidrachms) of Tincture of Quillaja (U. S. P.), to the Ammonia Water, before adding it to the mixture.

LINIMENTUM SAPONATO-CAMPHORATUM.

Camphorated Soap Liniment.

Opodeldoc. Solid Opodeldoc.

	Metric.	*Apothecaries'.*
White Castile Soap	75 Gm.	2½ troy ounces.
Camphor	25 Gm.	¾ troy ounce.
Alcohol	950 Cc.	30 fluidounces.
Oil of Thyme	3 Cc.	45 minims.
Oil of Rosemary	6 Cc.	90 minims.
Stronger Ammonia Water (U. S. P.)	50 Cc.	1⅝ fluidounces.

Introduce the Castile Soap, Camphor, and Alcohol, into a flask or suitable bottle, and apply a gentle heat until solution is effected, taking care that no loss of Alcohol be incurred by evaporation. Filter the liquid, while hot, into another flask or bottle; warm again, if necessary, to render the contents liquid, add the Oils and Stronger Ammonia Water, and when the whole has been thoroughly mixed, pour it into small dry vials, which should have been previously warmed, and should immediately be corked and cooled.

Note.—The quantity above given is usually divided into 18 to 20 vials. Solid Opodeldoc is directed by the *G. P.* to be prepared with soap made from animal fats; but pure, white Castile Soap may be used, provided it has been previously deprived of water. The Stronger Ammonia Water should be of the full strength prescribed by the *U. S. P.*

LINIMENTUM TEREBINTHINÆ ACETICUM.

Acetic Turpentine Liniment.

Linimentum Album. Stokes' Liniment. St. John Long's Liniment.

	Metric.	*Apothecaries'.*
Oil of Turpentine	100 Cc.	3 fluidounces.
Fresh Egg	One (1)	(1) one.
Oil of Lemon	4 Cc.	60 minims.
Acetic Acid U. S. P.)	20 Cc.	300 minims.
Rose Water (U. S. P.)	85 Cc.	2½ fluidounces.

Triturate or beat the contents of the Fresh Egg with the Oil of Turpentine and the Oil of Lemon in a mortar until they are thoroughly mixed. Then incorporate the Acetic Acid and Rose Water. Shake the mixture, whenever any of it is to be dispensed.

LINIMENTUM TIGLII.

Liniment of Croton Oil.

Linimentum Crotonis (B. P.)

	Metric.	*Apothecaries'.*
Croton Oil	16 Cc.	4 fluidrachms.
Oil of Cajuput	54 Cc.	14 fluidrachms.
Alcohol	54 Cc.	14 fluidrachms.

Mix them.

LINIMENTUM TIGLII COMPOSITUM.

Compound Croton Oil Liniment.

	Metric.	*Apothecaries'.*
Croton Oil	20 Cc.	5 fluidrachms.
Oil of Sassafras	20 Cc.	5 fluidrachms.
Oil of Turpentine	20 Cc.	5 fluidrachms.
Olive Oil	40 Cc.	10 fluidrachms.

Mix them.

LIQUOR ALUMINI ACETATIS.

Solution of Aluminum Acetate.

	Metric.	*Apothecaries'.*
Aluminum Sulphate (U. S. P.)	300 Gm.	10 troy ounces.
Acetic Acid (U. S. P.)	300 Gm.	10 troy ounces.
Calcium Carbonate	130 Gm.	4 troy ounces.
Water	1000 Cc.	32 fluidounces.

Dissolve the Calcium Carbonate in the Acetic Acid mixed with 250 Cc. (or 8 fluidounces) of Water, and the Aluminum Sulphate in 750 Cc. (or 24 fluidounces). Mix the two solutions, and allow the mixture to stand twenty-four hours, agitating occasionally. Then pour off the clear solution and filter.

The Solution contains from 7.5 to 8 per cent. of basic Aluminum Acetate.

Note—Practically identical with the *Liquor Aluminii Acetici* of the German Pharm.

LIQUOR ALUMINI ACETICO-TARTRATIS.

Solution of Aluminum Acetico-Tartrate.

Alum	750 parts.
Sodium Carbonate ($Na_2CO_3+10H_2O$)	700 parts.
Glacial Acetic Acid (U. S. P.)	150 parts.
Tartaric Acid	135 parts.
Water, a sufficient quantity	
To make	1000 parts.

Dissolve the Alum and the Sodium Carbonate each in 10,000 parts of Water, mix the solutions, and wash the precipitate with water, first by decantation, and afterwards on a strainer, until the washings run off tasteless. Allow the precipitate to drain and to shrink in volume by exposure on the strainer. Then transfer it to a tared capsule, add the Glacial Acetic and the Tartaric Acids, and apply heat until solution has been effected. Finally, evaporate the liquid to 1000 parts.

The product contains about 50 per cent. of dry, so-called Aluminum Acetico-Tartrate.

Note.—The dry salt may be obtained by evaporating the solution.

LIQUOR AMMONII ACETATIS CONCENTRATUS.

Concentrated Solution of Ammonium Acetate.

	Metric.	*Apothecaries'.*
Acetic Acid (U. S. P.)	500 Cc.	16 fluidounces.
Ammonium Carbonate, Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Neutralize the Acetic Acid with a sufficient quantity of Ammonium Carbonate, carefully avoiding an excess. Then add enough Water to make the product measure 1000 Cc. (or 32 fluidounces).

Note.—The product is of about 3 times the strength of the official *Liquor Ammonii Acetatis*, and keeps well.

It is not recommended to keep this solution on hand for the preparation of the official *Liquor Ammonii Acetatis*, as this is preferably made freshly when wanted for use. When it is, however, required, or deemed of advantage, to dispense the concentrated solution, it is suggested that it be diluted with Carbonic Acid Water, or be directed to be diluted with this at the time of administration.

LIQUOR AMMONII CITRATIS FORTIOR.

Stronger Solution of Ammonium Citrate.

	Metric.	*Apothecaries'.*
Citric Acid	560 Gm.	17 troy ounces.
Stronger Ammonia Water (U. S. P.), Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Neutralize the Citric Acid with the Stronger Ammonia Water, and add enough Water to make 1000 Cc. (or 32 fluidounces). The solution should be kept in bottles free from lead.

4 Cc. (1 fluidrachm) contain about 2.5 Gm. (40 grains) of Ammonium Citrate.

Note.—*Liquor Ammonii Citratis* (*B. P.*) may be prepared from this solution by mixing 1 volume of it with 4 volumes of Water.

LIQUOR ANTIGERMINARUS.

"Germicide."

	Metric.	*Apothecaries'.*
Thymol	16 Gm.	240 grains.
Oil of Eucalyptus	60 Cc.	2 fluidounces.
Oil of Lavender	60 Cc.	2 fluidounces.
Alcohol	800 Cc.	25½ fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Thymol and the Oils in the Alcohol, add enough Water to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

LIQUOR ANTISEPTICUS ALKALINUS.

"Alkaline Antiseptic."

	Metric.	*Apothecaries'.*
Potassium Bicarbonate	32 Gm.	1 troy ounce.
Sodium Benzoate	32 Gm.	1 troy ounce.
Sodium Borate	8 Gm.	¼ troy ounce.
Thymol	0.2 Gm.	3 grains.
Eucalyptol	0.2 Cc.	3 minims.
Oil of Peppermint	0.2 Cc.	3 minims.
Oil of Gaultheria	0.4 Cc.	6 minims.
Tincture of Cudbear (N. F.)	16 Cc.	½ fluidounce.
Alcohol	60 Cc.	2 fluidounces.
Glycerin	250 Cc.	8 fluidounces.
Purified Talc (U. S. P.)	10 Gm.	150 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Salts in 600 Cc. (19 fluidounces) of Water, and the Thymol, Eucalyptol, and Oils in the Alcohol. Mix the alcoholic solution with the Glycerin and the Tincture of Cudbear, add the solution of the Salts, and enough Water to make 1000 Cc. (or 32 fluidounces). Add the Purified Talc and shake occasionally during a few days if convenient; then filter, returning the first portions until the filtrate passes brilliantly clear.

LIQUOR AURI ET ARSENI BROMIDI.

Solution of Bromide of Gold and Arsenic.

	Metric.	*Apothecaries'.*
Arsenic Trioxide (U. S. P.)	2.5 Gm.	36 grains.
Gold Tribromide	3.25 Gm.	47 grains.
Bromine Water,		
Distilled Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Introduce the Arsenic Trioxide and about 135 Cc. (or 4½ fluidounces) of Bromine Water into a flask and heat gently until all free Bromine has disappeared. Then add Bromine Water, *twenty* (20) to *thirty* (30) *drops* at a time, until it will be present in slight excess, or until the solution does not become colorless after some time. Transfer the solution to a porcelain capsule, expel the excess of Bromine with the aid of gentle heat, dilute it with Water to about 600 Cc. (or 19 fluidounces),

and dissolve in this the Tribromide of Gold, adding enough Water to make 1000 Cc. (or 32 fluidounces).

0.6 Cc. (10 minims) of this solution contain 0.002 Gm. ($\frac{1}{32}$ grain) of Tribromide of Gold and the equivalent of 0.005 Gm. ($\frac{1}{13}$ grain) of Tribromide of Arsenic.

Note.—*Bromine Water* is made by shaking Bromine with about thirty times its weight of Water, occasionally during several hours, and decanting the Water from the undissolved Bromine.

The quantity of *Gold Tribromide* required for the above formula may be made by placing 1.466 Gm. (or 22 grains) of Gold Leaf into a flask containing 350 Cc. (or 11 fluidounces) of Water and 15.8 Gm. (or 230 grains) of Bromine, shaking the mixture until the Gold is dissolved, then boiling to expel excess of Bromine. When cold, this may be added to the solution of Arsenic Bromide, previously prepared, and the mixture adjusted with the Water to the proper volume.

Average dose: 0.2 Cc. (3 minims).

LIQUOR BISMUTHI.

Solution of Bismuth.

Liquid Bismuth.

	Metric.	*Apothecaries'.*
Glycerite of Bismuth (N. F.)	125 Cc.	4 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Distilled Water	750 Cc.	24 fluidounces.

Mix the Glycerite of Bismuth with the Distilled Water then add the Alcohol.

Solution of Bismuth may also be prepared in the following manner:

	Metric.	*Apothecaries'.*
Bismuth and Ammonium Citrate (U. S. P.)	17.5 Gm.	256 grains.
Alcohol	125 Cc.	4 fluidounces.
Glycerin	65 Cc.	2 fluidounces.
Ammonia Water (U. S. P.), Distilled Water, *To make*	1000 Cc.	32 fluidounces.

Dissolve the Bismuth and Ammonium Citrate in 750 Cc. (or 24 fluidounces) of Distilled Water, and allow the solution to stand a short time. Should any insoluble matter have deposited, pour off the clear liquid and add just enough Ammonia Water to the residue to dissolve it, or to cause it to retain a faint odor of Ammonia. Then filter the united liquids, add the Alcohol and Glycerin, and enough Distilled Water to make 1000 Cc. (or 32 fluidounces).

This preparation should be freshly made when wanted for use.

4 Cc. (1 fluidrachm) represent 0.06 Gm. (1 grain) of the Double Bismuth Salt.

Average dose: 4 Cc. (1 fluidrachm).

LIQUOR BROMI.

Solution of Bromine.

Smith's Solution of Bromine.

	Metric.	*Apothecaries'.*
Bromine	25 Gm.	360 grains.
Potassium Bromide	12.5 Gm.	180 grains.
Water	100 Cc.	3 fluidounces.

Dissolve the Potassium Bromide in the Water contained in a bottle, add the Bromine, and shake the mixture until this is dissolved. Keep the solution in glass-stoppered vials in a dark place.

Note.—As bromine vapor is very injurious to the respiratory passages and destructive to balances, it is often preferable to take the contents of an original bottle of Bromine—weighing the bottle, both before opening it and after emptying it, in order to ascertain the exact weight of the Bromine contained therein—and then to use a quantity of Potassium Bromide and of Water proportionate to the quantities above given.

LIQUOR CALCIS SULPHURATÆ.

Solution of Sulphurated Lime.

Solution of Oxysulphuret of Calcium. Vleminck's Solution (or Lotion.)

	Metric.	*Apothecaries'.*
Lime, freshly slaked	165 Gm.	5 troy ounces.
Sublimed Sulphur	250 Gm.	8 troy ounces.
Water, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Mix the slaked Lime with the Sulphur, and add the mixture gradually to 1750 Cc. (or 56 fluidounces) of boiling Water. Then boil the whole, under constant stirring, until it is reduced to 1000 Gm. (or 32 troy ounces), strain, and having allowed the solution to become clear by standing in a well-stoppered bottle, decant the clear brown liquid, and keep it in completely filled and well-stoppered bottles.

LIQUOR CARMINI.

Solution of Carmine.

	Metric.	*Apothecaries'.*
Carmine	65 Gm.	2 troy ounces.
Ammonia Water (U. S. P.)	365 Cc.	12 fluidounces.
Glycerin	365 Cc.	12 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Carmine to a fine powder in a wedgewood mortar, gradually add the Ammonia Water, and afterwards the Glycerin, with constant trituration. Transfer the mixture to a porcelain capsule, and heat it upon a water-bath, constantly stirring, *until the liquid is entirely free from ammoniacal odor.* Then cool, and add enough Water to make 1000 Cc. (or 32 fluidounces).

Note.—The best quality of Carmine, known in commerce as "No. 40," should be used for this preparation.

LIQUOR COCCINEUS.

Cochineal Color.

	Metric.	*Apothecaries'.*
Cochineal, in No. 50 powder	65 Gm.	2 troy ounces.
Potassium Carbonate	32 Gm.	1 troy ounce.
Alum	32 Gm.	1 troy ounce.
Potassium Bitartrate	65 Gm.	2 troy ounces.
Glycerin	500 Cc.	16 fluidounces.
Alcohol	32 Cc.	1 fluidounce.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Cochineal intimately with the Potassium Carbonate and 500 Cc. (or 16 fluidounces) of Water. Then add the Alum and Potassium Bitartrate successively, heat the mixture to boiling in a capacious vessel, then set it aside to cool, add to it the Glycerin and Alcohol, filter, and pass enough Water through the filter to make 1000 Cc. (or 32 fluidounces).

LIQUOR ELECTROPOEICUS.

Battery Fluid.

A For the Carbon and Zinc Battery.

I. For ordinary use.

	Metric.	*Apothecaries'.*
Sodium Dichromate, in coarse powder	125 Gm.	4 troy ounces.
Sulphuric Acid, commercial	125 Cc.	4 fluidounces.
Water, cold	1000 Cc.	32 fluidounces.

Pour the Sulphuric Acid upon the powdered Sodium Dichromate, and stir the mixture occasionally during one hour. Then slowly add the Water.

II. For use with the Galvano-Cautery.

	Metric.	*Apothecaries'.*
Sodium Dichromate, in coarse powder	145 Gm.	4½ troy ounces.
Sulphuric Acid, commercial	300 Cc.	9½ fluidounces.
Water, cold	1000 Cc.	32 fluidounces.

Proceed in the same manner as directed under No. I.

Note.—Sodium Dichromate is more soluble than the potassium salt, and its products of decomposition, in the battery, are also more soluble. As it is also much cheaper, it is now preferred in all large electric laboratories. When it cannot be obtained, Potassium Dichromate may be used in place of it, as heretofore. The two salts may be substituted for each other, weight for weight.

B. For the Leclanché Battery.

	Metric.	*Apothecaries'.*
Ammonium Chloride	325 Gm.	10½ troy ounces.
Water, enough to make	1000 Cc.	32 fluidounces.

Dissolve the salt in the Water.

LIQUOR EXTRACTI GLYCYRRHIZÆ.

Solution of Extract of Glycyrrhiza.

Solution of Extract of Licorice.

	Metric.	*Apothecaries'.*
Purified Extract of Glycyrrhiza (N. F.), a sufficient quantity,		
Alcohol	125 Cc.	4 fluidounces.
Glycerin	250 Cc.	8 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

In a small portion of Purified Extract of Glycyrrhiza, weighed into a tared capsule, determine the amount of water, by drying it to a constant weight. Then take of the Purified Extract a quantity equivalent to 250 Gm. (or 8 troy ounces) of dry extract, dissolve this, on a water-bath, in 250 Cc. (or 8 fluidounces) of Water, add the Glycerin, and allow the liquid to cool. Lastly, add the Alcohol, and enough Water to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 1 Gm. (15 grains) of dry Extract of Glycyrrhiza.

Average dose: 4 Cc. (1 fluidrachm).

LIQUOR FERRI ALBUMINATI.

Solution of Albuminate of Iron.

	Metric.	*Apothecaries'.*
Dry Egg-Albumen	40 Gm.	580 grains.
Solution of Ferric Oxychloride (N. F.)	130 Cc.	4⅓ fluidounces.
Alcohol	120 Cc.	3¾ fluidounces.
Aromatic Elixir (U. S. P.)	400 Cc.	12½ fluidounces.
Solution of Sodium Hydroxide (U. S. P.), Distilled Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Egg-Albumen in 2000 Cc. (or 64 fluidounces) of Distilled Water, strain the solution through muslin, and add the Solution of Ferric Oxychloride previously diluted with 2000 (or 64 fluidounces) of Distilled Water. Dilute 12 Cc. (or 3 fluidrachms) of Solution of Sodium Hydroxide with 100 Cc. (or 3 fluidounces) of Distilled Water, and cautiously add a sufficient quantity of this fluid to the iron-albumen mixture to exactly neutralize it. This is shown by the fine, light precipitate, first formed, becoming flocculent and settling to leave a clear and nearly colorless supernatant liquid. Wash the precipitate rapidly with Distilled Water, by decantation, until the washings give but a faint cloudiness with silver nitrate test solution. Then drain the precipitate on a muslin strainer, transfer it to a porcelain dish, immediately add 10 Gm. (or 145 grains) of Solution of Sodium Hydroxide, and while stirring add Distilled Water—not exceeding 150 Cc. (or 4¾ fluidounces)—until the precipitate is dissolved. Finally, add the Alcohol and Aromatic Elixir, previously mixed with enough Distilled Water, to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) of this solution contain about 0.026 Gm. (⅖ grain) of metallic iron in the form of Albuminate.

Average dose: 8 Cc. (2 fluidrachms).

LIQUOR FERRI HYPOPHOSPHITIS.

Solution of Hypophosphite of Iron.

Solution of Ferric Hypophosphite.

	Metric.	*Apothecaries'.*
Ferric Ammonium Sulphate (U. S. P.), in perfect crystals	330 Gm.	10 troy ounces.
Sodium Hypophosphite	220 Gm.	6¾ troy ounces.
Potassium Citrate	215 Gm.	6½ troy ounces.
Glycerin	150 Cc.	4½ fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferric Ammonium Sulphate, and the Sodium Hypophosphite, each, in 1500 Cc. (or 48 fluidounces) of Water, and, if necessary, filter each solution. Then mix them, and stir thoroughly; after a few minutes transfer the resulting magma to a close linen or muslin strainer, and wash the precipitate with about 500 Cc. (or 16 fluidounces) of Water. Allow it to drain, and then press it forcibly in the strainer, so as to remove as much of the liquid as possible. Transfer the precipitate from the strainer to a mortar, add to it the Potassium Citrate, and triturate until a perfectly smooth paste results. Then add the Glycerin, and gradually, while stirring, enough Water to make the solution measure 1000 Cc. (or 32 fluidounces). Place it for several days in a cold place, if convenient; then pour off the clear solution from any precipitate or crystals that may have formed, and keep the solution in small, completely-filled and well-corked bottles.

Solution of Ferric Hypophosphite may also be prepared in the following manner:

	Metric.	*Apothecaries'.*
Ferric Hypophosphite	165 Gm.	5 troy ounces.
Potassium Citrate	215 Gm.	6½ troy ounces.
Glycerin	150 Cc.	4½ fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Ferric Hypophosphite with 350 Cc. (or 11 fluidounces) of Water to a perfectly smooth mixture, then add the Potassium Citrate and Glycerin, and apply a gentle heat, until solution has been effected. Allow the liquid to cool, and add enough Water to make 1000 Cc. (or 32 fluidounces). Place the solution for several days in a cold place, if convenient; then pour off the clear solution from any precipitate or crystals that may have formed, and keep the solution in small, completely-filled and well-corked bottles.

4 Cc. (1 fluidrachm) of this Solution represent about 0.65 Gm. (10 grains) of Ferric Hypophosphite.

Average dose: 1 Cc. (15 minims).

LIQUOR FERRI IODIDI.

Solution of Ferrous Iodide.

	Metric.	*Apothecaries'.*
Iron, in the form of fine, bright, and finely-cut wire	200 Gm.	6 troy ounces.
Iodine	664 Gm.	20 troy ounces.
Diluted Hypophosphorous Acid (U. S. P.)	25 Cc.	6 fluidrachms.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

To the Iron and 750 Cc. (or 24 fluidounces) of Distilled Water, in a flask, add about one-half of the Iodine, and agitate continuously until the liquid becomes hot. Then moderate the reaction by placing the flask in cold water, or by allowing cold water to flow over it, meanwhile keeping up the agitation. When the reaction has moderated, add one-half of the remaining Iodine at a time, and carefully moderate the reaction each time, in the manner above directed. Finally, raise the contents of the flask to boiling and filter immediately through moistened pure filtering paper (the point of the filter being supported by a pellet of absorbent cotton) into a bottle containing the Diluted Hypophosphorous Acid. When all the liquid has passed, rinse the flask with 35 Cc. (or 1 fluidounce) of boiling Distilled Water, and pass this through the filter. Cork the bottle and set it aside to cool. Finally, add enough Distilled Water to make the product measure 1000 Cc. (or 32 fluidounces).

Average dose: 0.15 Cc. (2 minims).

Note.—This solution contains about 81 per cent. of Ferrous Iodide. On mixing 1 volume with 11 volumes of Syrup (U. S. P.), the product will be practically identical with Syrup of Ferrous Iodide (U. S. P.).

LIQUOR FERRI OXYCHLORIDI.

Solution of Ferric Oxychloride.

	Metric.	*Apothecaries'.*
Solution of Ferric Chloride (U. S. P.) . . .	350 Gm.	10⅝ troy ounces.
Ammonia Water (U. S. P.)	350 Gm.	10⅝ troy ounces.
Hydrochloric Acid (U. S. P.)	23.5 Gm.	335 grains.
Water, a sufficient quantity		
To make	1000 Gm.	32 troyounces.

Mix the Ammonia Water with 3200 Cc. (or 100 fluidounces) of cold Water, and the Solution of Ferric Chloride with 1600 Cc. (or 50 fluidounces) of cold Water. Add the latter solution slowly to the diluted Ammonia Water, with constant stirring. Let the mixture stand until the precipitate has subsided as far as practicable, and then decant the supernatant liquid. Add to the precipitate 2000 Cc. (or 64 fluidounces) of cold Water, mix well, and again set the mixture aside, as before. Repeat the washing with successive portions of cold Water, in the same manner, until the washings produce only faint opalescence with Silver Nitrate test solution. Then drain the precipitate on a cloth, express the excess of moisture as much as practicable, transfer it into a jar and mix the Hydrochloric Acid with it. Let the mixture stand three days, stirring it occasionally, and, if necessary, complete the solution of the ferric hydroxide by heating to about 40° C. (104° F.). Finally, add

sufficient Water to make the product weigh 1000 Gm. (or 32 troy ounces.)

A brown-red, clear, odorless liquid containing about 3.5 per cent. of iron as oxychloride.

Note.—This preparation is official in the *P. G.* and may, according to that authority, be dispensed when "Liquor Ferri Dialysati" is prescribed.

LIQUOR FERRI OXYSULPHATIS.

Solution of Oxysulphate of Iron.

	Metric.	*Apothecaries'.*
Ferrous Sulphate (U. S. P.)	165 Gm.	5 troy ounces.
Nitric Acid (U. S. P.)	165 Gm.	5 troy ounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferrous Sulphate in 850 Cc. (or 27 fluidounces) of boiling Distilled Water, in a flask, gradually add the Nitric Acid, and continue the heat until the escaping vapors cease to have a nitrous odor. When the reaction is completed, allow the liquid to cool and add enough Distilled Water to make 1000 Cc. (or 32 fluidounces).

LIQUOR FERRI PEPTONATI.

Solution of Peptonate of Iron.

	Metric.	*Apothecaries'.*
Peptone, dry	40 Gm.	580 grains.
Solution of Ferric Oxychloride (N. F.) . . .	200 Cc.	$6\frac{3}{8}$ fluidounces.
Alcohol	120 Cc.	$3\frac{3}{4}$ fluidounces.
Aromatic Elixir (U. S. P.)	400 Cc.	$12\frac{1}{2}$ fluidounces.
Solution of Sodium Hydroxide (U. S. P.)		
Distilled Water, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Peptone in 2000 Cc. (or 64 fluidounces) of Distilled Water and add the Solution of Ferric Oxychloride previously diluted with 2000 Cc. (or 64 fluidounces) of Distilled Water. Dilute 12 Cc. (or 3 fluidrachms) of Solution of Sodium Hydroxide with 100 Cc. (or 3 fluidounces) of Distilled Water, and cautiously add sufficient of this solution to the iron-peptone mixture to exactly neutralize it. This is shown by the fine, light precipitate, first formed, becoming flocculent and settling to leave a clear and nearly colorless supernatant liquid. "*An excess must be carefully avoided.*" Wash the precipitate rapidly with Distilled Water, by decantation, until the washings give but a faint cloudiness with silver nitrate test solution. Then drain the precipitate on a muslin strainer, transfer it to a porcelain dish, immediately

add 14 Gm. (or 205 grains) of Solution of Sodium Hydroxide, and while stirring, add Distilled Water—not exceeding 150 Cc. (or 4¾ fluidounces)—until the precipitate is dissolved. Finally, add the Alcohol and Aromatic Elixir, previously mixed with enough Distilled Water, to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) of this solution contain about 0.026 Gm. (⅔ grain) of metallic iron, in the form of peptonate.

Average dose: 8 Cc. (2 fluidrachm).

LIQUOR FERRI PEPTONATI CUM MANGANO.

Solution of Peptonate of Iron with Manganese.

	Metric.	*Apothecaries'.*
Ferric Peptonate	45 Gm.	655 grains.
Soluble Manganese Citrate	8 Gm.	115 grains.
Ammonia Water (U. S. P.)	13 Cc.	200 minims.
Aromatic Elixir (U. S. P.)	50 Cc.	12½ fluidrachms.
Alcohol	150 Cc.	4¾ fluidounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferric Peptonate in 250 Cc. (or 8 fluidounces) of Distilled Water, add the Ammonia Water, and then the Alcohol. Dissolve the Manganese Citrate in 100 Cc. (or 3 fluidounces) of Distilled Water, and add it to the first solution. Then add the Aromatic Elixir, and enough Distilled Water to make 1000 Cc. (or 32 fluidounces) of solution.

Average dose: 8 Cc. (2 fluidrachms).

Note.—If Manganese Peptonate is available, 26 Gm. (or 375 grains) of this may be used in place of the Soluble Manganese Citrate directed in the above formula.

LIQUOR FERRI PROTOCHLORIDI.

Solution of Protochloride of Iron.

Solution of Ferrous Chloride.

	Metric.	*Apothecaries'.*
Iron, in the form of fine, bright, and finely-cut wire	160 Gm.	5 troy ounces.
Hydrochloric Acid (U. S. P.)	625 Gm.	20 troy ounces.
Glycerin	250 Cc.	8 fluidounces.
Diluted Hypophosphorous Acid (U. S. P.)	10 Cc.	150 minims.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

To the Iron contained in a flask, add 350 Cc. (or 12 fluidounces) of Distilled Water, and the Hydrochloric Acid, and apply a gentle heat,

until effervescence ceases. Then raise the liquid to boiling, keep it at this temperature for a short time so that the Iron may be brought into solution as far as possible, filter the solution through a pellet of absorbent cotton placed in the neck of a funnel, and wash the cotton with a little Distilled Water. Evaporate the filtrate, over a boiling water-bath, until crystals begin to form, and the escaping vapors cease to redden, or only slightly affect, moistened blue litmus paper. Now add the Glycerin and the Diluted Hypophosphorous Acid, continue the heat, if necessary, until a perfect solution is obtained; then transfer the liquid to a graduated bottle, allow it to cool, and add enough Distilled Water to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 1.3 Gm. (20 grains) of Ferrous Chloride.

Average dose: 0.65 Cc. (10 minims).

LIQUOR HYDRARGYRI ET POTASSII IODIDI.

Solution of Iodide of Mercury and Potassium.

Solution of Potassium Iodohydrargyrate. Channing's Solution.

	Metric.	*Apothecaries'.*
Red Iodide of Mercury	2.5 Gm.	36 grains.
Potassium Iodide	2. Gm.	28 grains.
Distilled Water	250. Cc.	8 fluidounces.

Dissolve the salts in the Distilled Water.

Average dose: 0.2 Cc. (3 minims).

LIQUOR HYPOPHOSPHITUM.

Solution of Hypophosphites.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	35 Gm.	512 grains
Sodium Hypophosphite	20 Gm.	290 grains.
Potassium Hypophosphite	17.5 Gm.	256 grains.
Hypophosphorous Acid (U.S. P.)	6 Cc.	90 minims.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Salts, add the Acid, and dissolve them in sufficient Distilled Water to make 1000 Cc. (or 32 fluidounces); then filter.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Calcium Hypophosphite, 0.08 Gm. (1¼ grain) of Sodium Hypophosphite, and 0.065 Gm. (1 grain) of Potassium Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

LIQUOR HYPOPHOSPHITUM COMPOSITUS.

Compound Solution of Hypophosphites.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	8.5 Gm.	128 grains.
Potassium Hypophosphite	8.5 Gm.	128 grains.
Sodium Hypophosphite	2.2 Gm.	32 grains.
Ferric Hypophosphite	4.4 Gm.	64 grains.
Manganese Hypophosphite	2.2 Gm.	32 grains.
Quinine Hypophosphite	2.2 Gm.	32 grains.
Strychnine	0.065 Gm.	1 grain.
Potassium Citrate	8.5 Gm.	128 grains.
Hypophosphorous Acid (U. S. P.)	6. Cc.	90 minims.
Orange Flower Water	35. Cc.	1 fluidounce.
Glycerin	250. Cc.	8 fluidounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Calcium, Sodium, and Postassium Hypophosphites in 300 Cc. (or 9½ fluidounces) of Distilled Water. Dissolve the remaining solids in 250 Cc. (or 8 fluidounces) of Distilled Water, and add the Hypophosphorous Acid. Mix the two solutions, add the Orange Flower Water and Glycerin, and enough Distilled Water to make 1000 Cc. (or 32 fluidounces); allow the mixture to stand a day or two, if convenient, and filter.

Average dose: 4 Cc. (1 fluidrachm).

LIQUOR IODI CARBOLATUS.

Carbolized Solution of Iodine.

Boulton's Solution. French Mixture.

	Metric.	*Apothecaries'.*
Compound Solution of Iodine (U. S. P.)	15 Cc.	230 minims.
Carbolic Acid, liquefied by a gentle heat	5.5 Cc.	80 minims.
Glycerin	165 Cc.	5 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Glycerin with the Carbolic Acid and Compound Tincture of Iodine, add enough Water to make 1000 Cc. (or 32 fluidounces), and expose the mixture to sunlight until it has become colorless.

LIQUOR IODI CAUSTICUS.

Caustic Solution of Iodine.

Iodine Caustic. Churchill's Iodine Caustic.

	Metric.	*Apothecaries'.*
Iodine	25 Gm.	360 grains.
Potassium Iodide	50 Gm.	720 grains.
Water	100 Cc.	3 fluidounces.

Dissolve the Potassium Iodide and the Iodine in the Water.

LIQUOR MAGNESII BROMIDI.

Solution of Magnesium Bromide.

	Metric.	*Apothecaries'.*
Diluted Hydrobromic Acid (U. S. P.)	250 Cc.	8 fluidounces.
Magnesium Carbonate, a sufficient quantity.		

Saturate the Diluted Hydrobromic Acid with a sufficient quantity (about *16 Gm. or 240 grains*) of Magnesium Carbonate. When effervescence has ceased, filter.

4 Cc. (1 fluidrachm) contain about 0.5 Gm. (7½ grains) of Magnesium Bromide.

Average dose: 4 Cc. (1 fluidrachm).

LIQUOR MAGNESII SULPHATIS EFFERVESCENS.

Liquor Magnesiæ Effervescens.

Effervescent Solution of Magnesium Sulphate.

	Metric.	*Apothecaries'.*
Magnesium Sulphate	25 Gm.	360 grains.
Citric Acid	4 Gm.	60 grains.
Syrup of Citric Acid (U. S. P.)	60 Cc.	2 fluidounces.
Potassium Bicarbonate, crystals	2.5 Gm.	35 grains.
Water, a sufficient quantity		
To make	350 Cc.	12 fluidounces.

Dissolve the Magnesium Sulphate and the Citric Acid in 250 Cc. (or 8 fluidounces) of Water, add the Syrup of Citric Acid, and filter the solution into a strong bottle holding 400 Cc (or 12½ fluidounces). Then add enough Water to nearly fill the bottle, drop in the crystals of Potassium Bicarbonate, immediately close the bottle with a cork, and secure it with twine. Lastly, shake the bottle occasionally, until the crystals are dissolved.

Average dose: The contents of a bottle, prepared as above directed.

LIQUOR MORPHINÆ CITRATIS.

Solution of Morphine Citrate.

	Metric.	*Apothecaries'.*
Morphine (alkaloid)	3.3 Gm.	48 grains.
Citric Acid	2.75 Gm.	40 grains.
Cochineal	0.1 Gm.	1½ grains.
Alcohol	12.5 Cc.	3 fluidrachms.
Distilled Water, a sufficient quantity		
To make	100 Cc.	3 fluidounces.

Triturate the solids with the Alcohol and 70 Cc. (or 2 fluidounces) of Water; filter and pass enough Distilled Water through the filter to make 100 Cc. (or 3 fluidounces).

This solution should not be kept on hand, but prepared only when required.

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Morphine in the form of Citrate.

Dose: 0.32 Cc. (5 minims).

LIQUOR MORPHINÆ HYPODERMICUS.

Hypodermic Solution of Morphine.

Magendie's Solution of Morphine.

	Metric.	*Apothecaries'.*
Morphine Sulphate	3.3 Gm.	48 grains.
Salicylic Acid	0.1 Gm.	1½ grains.
Distilled Water, warm	100. Cc.	3 fluidounces.

Dissolve the Morphine Sulphate and the Salicylic Acid in the warm Distilled Water, and filter the solution through a small pellet of absorbent cotton. When the solution is cold, pass a little Distilled Water through the cotton, if necessary, to make the filtrate measure 100 Cc. (or 3 fluidounces). Keep the solution in well-stoppered vials, in a dark place.

Average dose: 0.32 Cc. (5 minims).

Note.—Particular care should be taken in dispensing and labelling this solution, so that it may not be mistaken for the so-called United States Solution of Morphine (*Liquor Morphiæ Sulphatis*, U. S. P., 1870), containing only 1 grain of Morphine Sulphate in each fluidounce, which is still used in some parts of this country.

The addition of Salicylic Acid as a preservative is an innovation, intended to give stability to the solution if it is to be kept in stock. It may be omitted if the solution is prepared for immediate use.

LIQUOR PANCREATICUS.

Pancreatic Solution.

	Metric.	*Apothecaries'.*
Pancreatin (U. S. P.)	17.5 Gm.	256 grains.
Sodium Bicarbonate	50 Gm.	1½ troy ounces.
Glycerin	250 Cc.	8 fluidounces.
Compound Spirit of Cardamom (N. F.)	35 Cc.	1 fluidounce.
Alcohol	35 Cc.	1 fluidounce.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Pancreatin and the Sodium Bicarbonate gradually with 625 Cc. (or 20 fluidounces) of Water; add the Alcohol, Compound Spirit of Cardamom and Purified Talc; mix them thoroughly by shaking, and pour the mixture upon a wetted filter, returning the first portions of the filtrate, until it runs off clear. Wash the filter with enough Water to obtain 750 Cc. (or 24 fluidounces) of filtrate. To this add the Glycerin.

Each 4 Cc. (1 fluidrachm) represent 0.065 Gm. (1 grain) of Pancreatin (U. S. P.).

Average dose: 4 Cc. (1 fluidrachm).

LIQUOR PEPSINI.

Liquid Pepsin.

	Metric.	*Apothecaries'.*
Glycerite of Pepsin (N. F.)	50 Cc.	1½ fluidounces.
Hydrochloric Acid (U. S. P.)	10 Cc.	150 minims.
Glycerin	315 Cc.	10 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Glycerite of Pepsin, the Acid and Glycerin; add sufficient Water to make 1000 Cc. (or 32 fluidounces), mix well, and filter after standing a convenient time, if necessary.

Average dose: 8 Cc. (2 fluidrachms).

LIQUOR PEPSINI AROMATICUS.

Aromatic Solution of Pepsin.

Aromatic Liquid Pepsin.

	Metric.	*Apothecaries'.*
Pepsin (U. S. P.)	17.5 Gm.	256 grains.
Oil of Cinnamon	4 Drops.	4 drops.
Oil of Pimenta	4 Drops.	4 drops.
Oil of Cloves	8 Drops.	8 drops.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Alcohol	35 Cc.	1 fluidounce.
Hydrochloric Acid (U. S. P.)	10 Cc.	150 minims.
Glycerin	250 Cc.	8 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Pepsin with 500 Cc. (or 16 fluidounces) of Water and the Hydrochloric Acid, and shake the mixture frequently until the Pepsin is dissolved. Then add the Purified Talc and the Oils, previously dissolved in the Alcohol; mix the whole thoroughly, by agitation, and filter it through a wetted filter, returning the first portions of the liquid until it runs through clear. Pass enough Water through the filter to make the filtrate measure 750 Cc. (or 24 fluidounces). To this add the Glycerin.

4 Cc. (1 fluidrachm) represent 0.065 Gm. (1 grain) of Pepsin (U. S. P.).

Average dose: 8 Cc. (2 fluidrachms).

LIQUOR PHOSPHATUM ACIDUS.

Acid Solution of Phosphates.

Solution of Acid Phosphates.

	Metric.	*Apothecaries'.*
Bone Ash	1000 Gm.	32 troy ounces.
Sulphuric Acid (sp. gr., 1.830)	780 Gm.	25 troy ounces.
Water	4000 Cc.	128 fluidounces.

Mix the Bone Ash with 1000 Cc. (or 32 fluidounces) of Water, add the Sulphuric Acid, diluted with 2000 Cc. (or 64 fluidounces) of Water, and mix thoroughly with a porcelain or glass stirrer. Now add the remainder of the Water and set the mixture aside for twenty-four hours, stirring occasionally. Then transfer the mixture to a strong muslin strainer, and subject this to a gradual pressure (avoiding contact with metals), so as to express as much of the liquid as possible. Lastly, filter this through paper.

The specific gravity of this solution is about 1.113 at 15° C. (59° F.).

Average dose: 8 Cc. (2 fluidrachms)

Note.—The quantity of product obtained depends on the degree of force used in pressing By strong pressure, about 3500 parts may be obtained. If desired, the magma may also be poured in a glass percolator, the neck of which contains a layer of fine quartz sand or asbestos, previously deprived of matters soluble in sulphuric or phosphoric acids. On cautiously pouring water on top, so as not to mix with the magma, the acid solution will be displaced. But the percolation must be interrupted as soon as the specific gravity of the percolate begins to fall below 1.113. The Sulphuric Acid used in this preparation may be the commercial variety, provided it is free from arsenic, and of a specific gravity not less than 1.830.

LIQUOR PHOSPHORI.

Solution of Phosphorus.

Thompson's Solution of Phosphorus.

	Metric.	*Apothecaries'.*
Phosphorus	0.07 Gm.	1 grain.
Absolute Alcohol (U. S. P.)	35 Cc.	1 fluidounce.
Spirit of Peppermint (U. S. P.)	0.5 Cc.	8 minims.
Glycerin	64.5 Cc.	2 fluidounces.

Dissolve the Phosphorus in the Absolute Alcohol, in a stoppered vial or test-tube, by immersion in a water-bath and frequent agitation, taking care that any loss of Alcohol, by evaporation, be made up from time to time Allow the solution to become nearly cold, and then add to it the Glycerin, slightly warmed. Finally add the Spirit of Peppermint. Keep the solution in a well-stoppered bottle, in the dark.

4 Cc. (1 fluidrachm) contain about 0.cc27 Gm. ($\frac{1}{24}$ grain) of Phosphorus.

Average dose: 0.65 Cc. (10 minims).

Note.—This Solution must not be confounded with the Spiritus Phosphori (N. F.), which is not intended to be administered as such, but is only to be used in compounding the Elixir or other preparations of Phosphorus.

The Phosphorus should be perfectly translucent, cut and weighed under water, and quickly dried with filtering paper before being dropped into the alcohol.

LIQUOR PICIS ALKALINUS.

Alkaline Solution of Tar.

	Metric.	*Apothecaries'.*
Tar	250 Gm.	8 troy ounces.
Potassium Hydroxide	125 Gm.	4 troy ounces.
Water	625 Cc.	20 fluidounces.

Dissolve the Potassium Hydroxide in the Water. Shake the solution with the Tar so that the latter may be dissolved, and strain the solution through muslin.

LIQUOR POTASSII ARSENATIS ET BROMIDI.

Solution of Potassium Arsenate and Bromide.

Liquor Arseni Bromidi. Solution of Bromide of Arsenic. Clemens' Solution.

	Metric.	*Apothecaries'.*
Arsenic Trioxide (U. S. P.)	10 Gm.	145 grains.
Potassium Bicarbonate	40.5 Gm.	587 grains.
Bromine	16 Gm.	235 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Boil the Arsenic Trioxide with the Potassium Bicarbonate, and 250 Cc. (or 8 fluidounces) of Water, until solution is effected. Allow this to cool, add 500 Cc. (or 16 fluidounces) of Water, then the Bromine, and afterwards enough Water to make 1000 Cc (or 32 fluidounces). Let the mixture stand a few hours, agitating it occasionally, then filter.

This solution contains an amount of Arsenic in combination, corresponding to 1 per cent. of Arsenic Trioxide.

Average dose: 0.2 Cc. (3 minims).

Note.—The title "Solution of Bromide of Arsenic" (*Liquor Arseni Bromidi*) which is often applied to Clemens' Solution or similar preparations, is a misnomer, since arsenic bromide cannot exist, as such, in presence of water, but is split up into hydrobromic and arsenous acids. The proportions of the ingredients, in the formula above given, have been adjusted, as closely as practicable, so as to yield definite compounds, viz.: arsenate and bromide of potassium.

In order to prevent injury to the balances by weighing a definite amount of Bromine, the plan suggested in the Note to Liquor Auri et Arseni Bromidi may be applied to this preparation, viz.: to prepare such a quantity of the latter at one time, as will be commensurate to the actual contents of an original vial of Bromine.

LIQUOR POTASSÆ CHLORINATÆ.

Solution of Chlorinated Potassa.

Liquor Potassæ Chloratæ. Javelle Water.

	Metric.	*Apothecaries'.*
Potassium Carbonate	58 Gm.	$1\frac{3}{4}$ troy ounces.
Chlorinated Lime (U. S. P.)	80 Gm.	$2\frac{1}{2}$ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Chlorinated Lime, contained in a tared flask, with 400 Cc. (or 12 fluidounces) of Water. Dissolve the Potassium Carbonate in 300 Cc. (or 9 fluidounces) of boiling Water, and pour the hot solution into the mixture first prepared. Shake the flask well, stopper it, set it aside to cool, and then add enough Water to make the contents measure

1000 Cc. (or 32 fluidounces). Allow the suspended matters to subside, and remove the clear solution by means of a siphon, or by straining through muslin. Keep the product in well-stoppered bottles.

Note.—The Chlorinated Lime should not contain less than 25 per cent. of available chlorine.

LIQUOR SACCHARINI.

Solution of Saccharin.

	Metric.	*Apothecaries'.*
Saccharin (U. S. P.)	17.5 Gm.	256 grains.
Sodium Bicarbonate	8.75 Gm.	128 grains.
Alcohol	62.5 Cc.	2 fluidounces.
Water, a sufficient quantity		
To make	250 Cc.	8 fluidounces.

Dissolve the Saccharin and the Sodium Bicarbonate in 160 Cc. (or 5 fluidounces) of Water, filter the solution, add the Alcohol to the filtrate, and pass enough Water through the filter to make 250 Cc. (or 8 fluidounces).

4 Cc. (1 fluidrachm) represent 0.26 Gm. (4 grains) of Saccharin.

Note.—The Solution of Saccharin is intended to be used for sweetening liquids or solids, when the use of sugar is objectionable, or when a sweet taste is to be imparted to a liquid without increasing its density.

LIQUOR SERIPARUS.

Liquid Rennet.

	Metric.	*Apothecaries'.*
Calves' Rennet, fresh	100 Gm.	3 troy ounces.
Sodium Chloride	40 Gm.	580 grains.
Alcohol	190 Cc.	6 fluidounces.
Water	810 Cc.	26 fluidounces.

Dissolve the Sodium Chloride in the Water, add the Alcohol, and macerate in this mixture the Rennet (or the washed mucous membrane of the fresh stomach of a suckling calf), during three days, with frequent agitation. Then filter.

Note.—If this liquid is to be used merely for curdling the milk, without separating the whey as a distinct layer, it should be added to the milk, previously warmed to a temperature of about 35° C. (95° F.), and the mixture should then be set aside undisturbed, until it coagulates. If the whey is to be separated, the Liquid Rennet should be added to the milk while cold, and the mixture heated to about 35° C. (95° F.), but not exceeding 40° C. (104° F.). One part of the liquid should coagulate between 200 and 300 parts of cows' milk.

LIQUOR SODII ARSENATIS, PEARSON.

Pearson's Solution of Sodium Arsenate.

	Metric.	*Apothecaries'.*
Sodium Arsenate, in perfect crystals	1 Gm.	14½ grains.
Distilled Water	600 Cc.	19 fluidounces.

Dissolve the Sodium Arsenate in the Distilled Water, and filter, if necessary.

This Solution contains about $\frac{1}{10}$ per cent. of anhydrous (or ⅓ per cent. of the official crystallized) Sodium Arsenate.

Average dose: 0.2 Cc. (3 minims).

Note.—This preparation should not be confounded with the *Liquor Sodii Arsenatis*, U. S. P., *which is ten times stronger than the above preparation.* Pearson's Solution is recognized in the Codex under the title *Soluté d' Arsenate de Soude* (or *Solution Arsenicale de Pearson*). It is recommended that Pearson's Solution be dispensed only when expressly designated as "Pearson's."

LIQUOR SODII BORATIS COMPOSITUS.

Compound Solution of Sodium Borate.

Dobell's Solution.

	Metric.	*Apothecaries'.*
Sodium Borate	15 Gm.	240 grains.
Sodium Bicarbonate	15 Gm.	240 grains.
Carbolic Acid (Phenol, U. S. P.)	3 Gm.	48 grains.
Glycerin	35 Cc.	1 fluidounce.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Salts in about 500 Cc. (or 16 fluidounces) of Water, then add the Glycerin, and the Carbolic Acid previously liquefied by warming, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces).

LIQUOR SODII CARBOLATIS.

Solution of Sodium Carbolate.

Carbolic Acid (Phenol, U. S. P.)	50 parts.
Sodium Hydroxide (U. S. P.)	3.5 parts.
Water	46.5 parts.

Dissolve the Sodium Hydroxide in the Water, add the Carbolic Acid, and warm gently, until it is dissolved.

This preparation should be made freshly, when wanted for use.

Note.—The formula is based upon that of the G. P. *I.* (1872).

LIQUOR SODII CITRATIS.

Solution of Sodium Citrate.

Mistura Sodii Citratis. Saturatio. Potio Riveri (G. P.)

	Metric.	*Apothecaries'.*
Citric Acid	20 Gm.	290 grains.
Sodium Bicarbonate	25 Gm.	360 grains.
Water	1000 Cc.	32 fluidounces.

Dissolve the Citric Acid in the Water contained in a bottle, add the Sodium Bicarbonate, dissolve it by agitation, and immediately stopper the bottle securely.

This preparation should be freshly prepared when wanted for use.

Average dose: 8 Cc. (2 fluidrachms).

Note.—The G. P. directs that, when "Saturatio" is prescribed, without any specification of the ingredients or strength, *Potio Riveri*, represented here by *Liquor Sodii Citratis*, be dispensed.

LIQUOR SODII CITRO-TARTRATIS EFFERVESCENS.

Effervescent Solution of Sodium Citro-Tartrate.

(Tartro-Citric Lemonade.)

	Metric.	*Apothecaries'.*
Sodium Bicarbonate	26 Gm.	380 grains.
Tartaric Acid	24 Gm.	350 grains.
Citric Acid	2 Gm.	30 grains.
Syrup of Citric Acid (U. S. P.)	50 Cc.	1½ fluidounces.
Water, a sufficient quantity		
To make	360 Cc.	11½ fluidounces.

Dissolve 24 Gm. (or 350 grains) of the Sodium Bicarbonate in 250 Cc. (or 8 fluidounces) of Water, add the Tartaric and Citric Acids, and, when they are dissolved, the Syrup of Citric Acid. Filter the solution into a strong bottle of about 375 Cc. (or 12 fluidounces) capacity, and pass enough Water through the filter to make the filtrate measure 320 Cc. (or 10½ fluidounces). Dissolve the remainder of the Sodium Bicarbonate, 2 Gm. (or 30 grains), in 32 Cc. (or 1 fluidounce) of Water, filter the solution, pour it on top of the solution in the bottle, which close immediately with a cork, and secure it with twine. Then shake the bottle.

Average dose: The contents of a bottle, prepared as above directed.

LIQUOR SODII OLEATIS.

Solution of Sodium Oleate.

	Metric.	*Apothecaries'.*
White Castile Soap, dry and powdered . . .	625 Gm.	20 troy ounces.
Water, a sufficient quantity		
To make	10,000 Cc.	320 fluidounces.

Mix the Castile Soap with 2,500 Cc. (or 80 fluidounces) of Water so as to produce a uniform and gelatinous mixture. Then add 6,500 Cc. (or 208 fluidounces) more of Water, apply heat until the Soap is dissolved, allow the liquid to cool and add enough Water to make it measure 10,000 Cc. (or 320 fluidounces).

Note.—This solution is intended to be used in the preparation of Oleates.

LIQUOR STRYCHNINÆ ACETATIS.

Solution of Strychnine Acetate.

Hall's Solution of Strychnine.

	Metric.	*Apothecaries'.*
Strychnine Acetate	0.21 Gm.	3 grains.
Diluted Acetic Acid (U. S. P.)	3.5 Cc.	48 minims.
Alcohol	25. Cc.	6 fluidrachms.
Compound Tincture of Cardamom (U. S. P.)	1. Cc.	15 minims.
Water, a sufficient quantity		
To make	100 Cc.	3 fluidounces.

Dissolve the Strychnine Acetate in about 50 Cc. (or 1½ fluidounces) of Water mixed with the Diluted Acetic Acid, then add the Alcohol, Compound Tincture of Cardamom, and lastly, enough Water to make 100 Cc. (or 3 fluidounces). Allow the mixture to stand a few days, if convenient, and filter.

4 Cc. (1 fluidrachm) contain 0.0084 Gm. (⅛ grain) of Strychnine Acetate.

Average dose: 0.6 Cc. (10 minims).

Note.—The B. P. directs a *Liquor Strychniæ Hydrochloratis* (with synonym: *Liquor Strychniæ*) which is much stronger, and should not be confounded with the above preparation. It should never be dispensed, unless expressly designated. It may be prepared by dissolving 0.065 (or 1 grain) of crystallized Strychnine (alkaloid) in 4 Cc. (or 80 minims) of Water with the aid of 2 drops of Diluted Hydrochloric Acid, adding 1.3 Cc (or 20 minims of Alcohol, and then enough Water to make 6.5 Cc. (or 100 minims). This product contains ⅛ grain of Strychnine in each fluidrachm.

LIQUOR ZINCI ET ALUMINI COMPOSITUS.

Compound Solution of Zinc and Aluminum.

	Metric.	*Apothecaries'.*
Zinc Sulphate	1000 Gm.	32 troy ounces.
Aluminum Sulphate	1000 Gm.	32 troy ounces.
Betanaphthol (U. S. P.)	3 Gm.	45 grains.
Oil of Thyme	10 Cc.	150 minims.
Water, a sufficient quantity		
To make	5000 Cc.	160 fluidounces.

Dissolve the Zinc Sulphate and the Aluminum Sulphate in 4000 Cc. (or 128 fluidounces) of Water, by the aid of heat, add the Betanaphthol and Oil of Thyme, and shake the mixture occasionally, in a stoppered bottle, until it cools. Set it aside for a few days, if convenient, and then pass it through a wetted filter, following it with enough Water to make 5000 Cc. (or 160 fluidounces).

Note.—The commercial Aluminum Sulphate (*not* Alum) may be used for this preparation. This generally contains a trace of iron, but by allowing the liquid to stand, this will be gradually precipitated.

LIQUOR ZINCI ET FERRI COMPOSITUS.

Compound Solution of Zinc and Iron.

Deodorant Solution.

	Metric.	*Apothecaries'.*
Zinc Sulphate	1000 Gm.	32 troy ounces.
Ferrous Sulphate	1000 Gm.	32 troy ounces.
Copper Sulphate	325 Gm.	10 troy ounces.
Betanaphthol (U. S. P.)	3 Gm.	45 grains.
Oil of Thyme	10 Cc.	150 minims.
Hypophosphorous Acid (U. S. P.)	20 Cc.	5 fluidrachms.
Water, a sufficient quantity		
To make	5000 Cc.	160 fluidounces.

Dissolve the Zinc Sulphate, Ferrous Sulphate, and Copper Sulphate, in 4000 Cc. (or 128 fluidounces) of boiling Water, add the Betanaphthol, and Oil of Thyme, and shake the mixture occasionally, in a stoppered bottle, until it is cold. Then add the Hypophosphorous Acid, filter the liquid through a wetted filter, and lastly, pass enough Water through the filter to make 5000 Cc. (or 160 fluidounces).

Note.—This solution is used as a simple deodorant and antiseptic for common domestic use, when it is unnecessary or impracticable to employ more powerful agents.

When a deodorant solution is required for purposes where *iron* is objectionable, as for instance, where woven fabrics are to be steeped in it, the Compound Solution of Zinc and Aluminum (see above), may be employed.

LIQUOR ZINGIBERIS.

Solution of Ginger.

Soluble Essence of Ginger.

	Metric.	*Apothecaries'.*
Fluidextract of Ginger (U. S. P.)	335 Cc.	10¾ fluidounces.
Pumice, in fine powder, and well washed . .	100 Gm.	3 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	

Pour the Fluidextract of Ginger into a bottle, add to it the Pumice, and shake the mixture thoroughly and repeatedly in the course of several hours. Then add the Water in portions of about 125 Cc. (or 4 fluidounces), shaking well and frequently after each addition. When all is added, repeat the agitation occasionally during twenty-four hours, then filter, returning the first portions of the filtrate until it runs through clear, and, if necessary, pass enough Water through the filter to make 1000 Cc. (or 32 fluidounces).

Average dose: 3 Cc. (45 minims).

LOTIO ADSTRINGENS.

Astringent Lotion.

Warren's Styptic.

	Metric.	*Apothecaries'.*
Sulphuric Acid (U. S. P.)	38 Cc.	2½ fluidounces.
Oil of Turpentine	31 Cc.	2 fluidounces.
Alcohol	31 Cc.	2 fluidounces.

To the Sulphuric Acid, contained in a wedgewood mortar, slowly add the Oil of Turpentine, in small portions at a time, constantly stirring. Allow the mixture to cool, then add the Alcohol cautiously, in the same manner, and continue stirring until no more fumes arise. When the liquid is cold, pour it into a glass-stoppered bottle.

Note.—In preparing this mixture, caution should be used, so that the temperature may not rise too high. Particular care is to be observed, if a larger quantity of this mixture is to be prepared. In this case it is preferable to prepare it in several portions.

LOTIO FLAVA.

Yellow Lotion.

Yellow Wash. Aqua Phagedænica Flava.

	Metric.	*Apothecaries'.*
Corrosive Mercuric Chloride	3 Gm.	48 grains.
Solution of Lime (U. S. P.),		
Boiling Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Corrosive Mercuric Chloride in 35 Cc. (or 1 fluidounce) of boiling Water, and add the solution to a sufficient quantity of Solution of Lime, to make 1000 Cc. (or 32 fluidounces).

This mixture should be well agitated whenever any of it is to be dispensed.

LOTIO NIGRA.

Black Lotion.

Black Wash. Aqua Phagedænica Nigra.

	Metric.	*Apothecaries'.*
Mild Mercurous Chloride	8.75 Gm.	128 grains.
Water,		
Solution of Lime (U. S. P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Mild Mercurous Chloride with 35 Cc. (or 1 fluidounce) of Water, and gradually add a sufficient quantity of Solution of Lime, to make 1000 Cc. (or 32 fluidounces).

This mixture should be well agitated, whenever any of it is to be dispensed.

LOTIO PLUMBI ET OPII.

Lotion of Lead and Opium.

Lead and Opium Wash.

	Metric.	*Apothecaries'.*
Lead Acetate	17.5 Gm.	256 grains.
Tincture of Opium (U. S. P.)	35 Cc.	1 fluidounce.
Water, a sufficient quantity		
To make	1000. Cc.	32 fluidounces.

Dissolve the Lead Acetate in about 650 Cc. (or 24 fluidounces) of Water, add the Tincture of Opium, and enough Water to make 1000 Cc. (or 32 fluidounces).

This mixture should be well agitated, whenever any of it is to be dispensed.

MAGMA MAGNESIÆ.

Magnesia Magma.

(Milk of Magnesia.)

	Metric.	*Apothecaries'.*
Magnesium Sulphate	250 Gm.	8 troy ounces.
Sodium Hydroxide	81 Gm.	2½ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Magnesium Sulphate in 4000 Cc. (or 128 fluidounces) of Water and the Sodium Hydroxide in another portion of 4000 Cc. (or 128 fluidounces) of Water and filter the solutions. Pour the Sodium Hydroxide solution slowly, in a thin stream, into the Magnesium Sulphate solution, with constant stirring. Allow the precipitate to subside and decant the clear fluid. Wash the Magma several times with Water by decantation until the washings are free from saline taste. Transfer the Magma to a muslin strainer and allow to drain without pressing. Then re-transfer it to suitable vessels and add sufficient Water to make 1000 Cc. of fluid and mix thoroughly by stirring.

One teaspoonful of this preparation contains about three grains of Magnesium Hydroxide

Average dose: 8 Cc. (2 fluidrachms).

Note.—The Water used in preparing this must be free from organic matter or the Magma will become discolored.

MISTURA ACACIÆ.

Mixture of Acacia.

Mixtura Gummosa (G. P. *I.*).

	Metric.	*Apothecaries'.*
Acacia, in coarse powder	75 Gm.	2½ troy ounces.
Sugar	75 Gm.	2½ troy ounces.
Water	850 Cc.	28 fluidounces.

Dissolve the Acacia and Sugar in the Water.

This preparation should be freshly made, when wanted for use.

MISTURA ADSTRINGENS ET ESCHAROTICA.

Astringent and Escharotic Mixture.

Villate's Solution.

	Metric.	*Apothecaries'.*
Solution of Lead Subacetate (U. S. P.)	100 Cc.	3 fluidounces.
Copper Sulphate	65 Gm.	2 troy ounces.
Zinc Sulphate	65 Gm.	2 troy ounces.
Diluted Acetic Acid (U. S. P.)	850 Cc.	28 fluidounces.

Dissolve the Copper Sulphate and Zinc Sulphate in the Diluted Acetic Acid, add the Solution of Lead Subacetate, and agitate thoroughly. Set the mixture aside, so that the precipitate may subside. Then decant, or siphon off, the clear liquid and preserve it for use.

Note.—In attempting to pass the liquid through a filter, it will usually be found that the finely divided precipitate of lead sulphate will partially pass along with it. This may be prevented (in this and many similar cases) by adding to the mixture a small quantity of starch, thoroughly incorporating this by agitation, and pouring the mixture on the previously wetted filter. The first portions of the filtrate are poured back until it runs through clear.

MISTURA AMMONII CHLORIDI.

Mixture of Ammonium Chloride.

Mistura (or Mixtura) Solvens Simplex.

	Metric.	*Apothecaries'.*
Ammonium Chloride	25 Gm.	360 grains.
Purified Extract of Glycyrrhiza (N. F.) . . .	25 Gm.	360 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the solids in a sufficient quantity of Water to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

Note.—Sometimes a *Mistura* (or *Mixtura*) *Solvens Stibiata* is prescribed. This may be prepared by dissolving 0.30 Gm. (or 4½ grs.) of Antimony and Potassium Tartrate in 1000 Cc. (or 32 fluidounces) of *Mistura Ammonii Chloridi.*

MISTURA CAMPHORÆ ACIDA.

Acid Camphor Mixture.

Mistura Antidysenterica. Hope's Mixture.

	Metric.	*Apothecaries'.*
Nitric Acid (U. S. P.)	17.5 Cc.	240 minims.
Tincture of Opium (U. S. P.)	12 Cc.	160 minims.
Camphor Water (U. S P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Add the Nitric Acid, and then the Tincture of Opium, to enough Camphor Water, to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

MISTURA CAMPHORÆ AROMATICA.

Aromatic Camphor Mixture.

Parrish's Camphor Mixture.

	Metric.	*Apothecaries'.*
Compound Tincture of Lavender (U. S. P.) .	250 Cc.	8 fluidounces.
Sugar	35 Gm.	1 troy ounce.
Camphor Water (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Compound Tincture of Lavender with about 500 Cc. (or 16 fluidounces) of Camphor Water, dissolve the Sugar in the mixture, and add enough Camphor Water to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

MISTURA CARMINATIVA.

Carminative Mixture.

Dalby's Carminative.

	Metric.	*Apothecaries'.*
Magnesium Carbonate	65 Gm.	2 troy ounces.
Potassium Carbonate	3 Gm.	45 grains.
Tincture of Opium (U. S. P.)	25 Cc.	360 minims.
Oil of Caraway	0.5 Cc.	8 minims.
Oil of Fennel	0.5 Cc.	8 minims.
Oil of Peppermint	0.5 Cc.	8 minims.
Syrup (U. S. P.)	160 Cc.	5 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Oils with about 10 Gm. (or 150 grains) of Magnesium Carbonate, and 750 Cc. (or 24 fluidounces) of Water gradually added. Then add the remainder of the Magnesium Carbonate and the other ingredients, and lastly, add enough Water to make 1000 Cc. (or 32 fluidounces).

This preparation should be freshly made, when wanted for use.

32 Cc. (1 fluidounce) represent about 0.065 Gm. (1 grain) of Opium.

Average dose: Infants, 0.5 Cc. (8 minims).

MISTURA CHLORALI ET POTASSII BROMIDI COMPOSITA.

"Chloral and Bromide Compound."

	Metric.	*Apothecaries'.*
Hydrated Chloral (U. S. P.)	200 Gm.	6 troy ounces.
Potassium Bromide	200 Gm.	6 troy ounces.
Extract of Indian Cannabis (U. S. P.)	2 Gm.	30 grains.
Extract of Hyoscyamus (U. S. P.)	2 Gm.	30 grains.
Pumice, in fine powder and well washed	20 Gm.	300 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Extracts in a mortar with the Pumice, gradually added, until they are thoroughly disintegrated. Dissolve the Hydrated Chloral and the Potassium Bromide in 625 Cc. (or 20 fluidounces) of Water, previously heated to about 90° C (194° F.), and gradually add the hot solution to the Extracts and Pumice with constant trituration.

Set the mixture aside during 24 hours, shaking it occasionally, and filter, adding enough Water through the filter to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.8 Gm. (12 grains) each, of Hydrated Chloral and Potassium Bromide, and 0.008 Gm. (⅛ grain) each, of the Extracts of Indian Cannabis and Hyoscyamus.

Average dose: 4 Cc. (1 fluidrachm)

Note.—Although this preparation is slightly weaker in Hydrated Chloral and Potassium Bromide than the preparation heretofore recommended in this Formulary, it possesses the advantage of holding the active constituents of the Extracts completely in solution, and is believed to be in other respects more satisfactory.

MISTURA CHLOROFORMI ET CANNABIS INDICÆ COMPOSITA.

Compound Mixture of Chloroform and Cannabis Indica.

Chloroform Anodyne.

	Metric.	*Apothecaries'.*
Chloroform	125 Cc.	4 fluidounces.
Ether	32.5 Cc.	1 fluidounce.
Tincture of Indian Cannabis (U. S. P.)	185 Cc.	6 fluidounces.
Tincture of Capsicum (U. S. P.)	35 Cc.	1 fluidounce.
Morphine Sulphate	2.5 Gm.	36 grains.
Oil of Peppermint	2 Cc.	30 minims.
Glycerin	125 Cc.	4 fluidounces.
Water	65 Cc.	2 fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Oil of Peppermint in 500 Cc. (or 16 fluidounces) of Alcohol, add the Chloroform, Ether, and the Tinctures. Mix well, and add the Morphine Sulphate, previously dissolved in the Water and Glycerin. Finally, add enough Alcohol to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.5 Cc. (7½ minims) of Chloroform; 0.75 Cc. (11 minims) of Tincture of Indian Cannabis, 0.123 Cc. (2 minims) of Tincture of Capsicum, and 0.009 Gm. (⅐ grain) of Morphine Sulphate.

Average dose: 2 Cc. (30 minims).

MISTURÆ CONTRA DIARRHŒAM.

Diarrhœa Mixtures.

The following formulas for Diarrhœa (or Cholera) Mixtures are in more or less general use, and popular in the order given:

1. Cholera Mixture. "Sun Mixture."

	Metric.	*Apothecaries'.*
Tincture of Opium (U. S. P.)	25 Cc.	6 fluidrachms.
Tincture of Capsicum (U. S. P.)	12.5 Cc.	3 fluidrachms.
Tincture of Rhubarb (U. S. P.)	12.5 Cc.	3 fluidrachms.
Spirit of Camphor (U. S. P.)	25 Cc.	6 fluidrachms.
Spirit of Peppermint (U. S. P.)	25 Cc.	6 fluidrachms.
Alcohol	25 Cc.	6 fluidrachms.

Average dose: 2 Cc. (30 minims).

2. Squibb's Diarrhœa Mixture.

	Metric.	*Apothecaries'.*
Tincture of Opium (U. S. P.)	25 Cc.	6 fluidrachms.
Tincture of Capsicum (U. S. P.)	12.5 Cc.	3 fluidrachms.
Spirit of Camphor (U. S. P.)	25 Cc.	6 fluidrachms.
Chloroform	10 Cc.	2½ fluidrachms.
Alcohol, a sufficient quantity		
To make	125 Cc.	4 fluidounces.

Average dose: 2 Cc. (30 minims).

3 Loomis' Diarrhœa Mixture.

	Metric.	*Apothecaries'.*
Tincture of Opium (U. S. P.)	16.5 Cc.	4 fluidrachms.
Tincture of Rhubarb (U. S. P.)	8.25 Cc.	2 fluidrachms.
Compound Tincture of Gambir [Catechu] (U. S. P)	50 Cc.	1½ fluidounces.
Oil of Sassafras	1.25 Cc.	20 minims.
Compound Tincture of Lavender (U. S. P.), a sufficient quantity		
To make	125 Cc.	4 fluidounces.

Average dose: 2 Cc. (30 minims).

4. Thielmann's Diarrhœa Mixture.

	Metric.	*Apothecaries'.*
Wine of Opium (U. S. P.)	32 Cc.	1 fluidounce.
Tincture of Valerian (U. S. P.)	50 Cc.	1½ fluidounces.
Ether (U. S. P.)	16 Cc.	½ fluidounce.
Oil of Peppermint	4 Cc.	1 fluidrachm.
Fluidextract of Ipecac (U. S. P.)	1 Cc.	16 minims.
Alcohol, a sufficient quantity		
To make	125 Cc.	4 fluidounces.

Average dose: 2 Cc. (30 minims).

5. Velpeau's Diarrhœa Mixture.

	Metric.	*Apothecaries'.*
Camphor	4.50 Gm.	65 grains.
Tincture of Opium (U. S. P.)	42 Cc.	10 fluidrachms.
Compound Tincture of Gambir [Catechu] (U. S. P.)	85 Cc.	21 fluidrachms.

Dissolve the Camphor in the Tinctures, and filter if necessary.

Average dose: 2 Cc. (30 minims).

MISTURÆ COPAIBÆ.

Copaiba Mixtures.

1. Lafayette Mixture.

	Metric.	*Apothecaries'.*
Copaiba	125 Cc.	4 fluidounces.
Spirit of Nitrous Ether (U. S. P.)	125 Cc.	4 fluidounces.
Compound Tincture of Lavender (U. S. P.)	125 Cc.	4 fluidounces.
Solution of Potassium Hydroxide (U. S. P.)	32 Cc.	1 fluidounce.
Syrup (U. S. P.)	300 Cc.	10 fluidounces.
Mucilage of Acacia (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Copaiba with the Solution of Potassium Hydroxide and the Spirit of Nitrous Ether. Then add the Compound Tincture of Lavender, and lastly, the Syrup and Mucilage of Acacia. Mix the whole thoroughly by shaking.

This mixture should be well agitated, whenever any of it is to be dispensed.

4 Cc. (1 fluidrachm) contain 0.5 Cc. (7½ minims) of Copaiba

Average dose: 8 Cc. (2 fluidrachms).

2. Chapman's Mixture.

	Metric.	*Apothecaries'.*
Copaiba	250 Cc.	8 fluidounces.
Spirit of Nitrous Ether (U. S. P.)	250 Cc.	8 fluidounces.
Compound Tincture of Lavender (U. S. P.)	65 Cc.	2 fluidounces.
Tincture of Opium (U. S. P.)	32 Cc.	1 fluidounce.
Mucilage of Acacia (U. S. P.)	125 Cc.	4 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Average dose: 4 Cc. (1 fluidrachm).

MISTURA GUAIACI.

Mixture of Guaiac.

	Metric.	*Apothecaries'.*
Guaiac (U. S. P.), in very fine powder	25 Gm.	360 grains.
Sugar	25 Gm.	360 grains.
Acacia, in fine powder	15 Gm.	220 grains.
Cinnamon Water (U. S. P.)	1000 Cc.	32 fluidounces.

Triturate the powdered Guaiac with the Sugar and Acacia, then gradually add the Cinnamon Water, and mix thoroughly.

This mixture should be well agitated, whenever any of it is to be dispensed.

Average dose: 16 Cc. (4 fluidrachms).

Note.—This preparation is practically identical with the *Mistura Guaiaci* of the B. P.

MISTURA OLEO-BALSAMICA.

Oleo-balsamic Mixture.

Mixtura Oleoso-balsamica (G. P.). **Balsamum Vitæ Hoffmanni.**

	Metric.	*Apothecaries'.*
Oil of Lavender	4 Cc.	1 fluidrachm.
Oil of Thyme	4 Cc.	1 fluidrachm.
Oil of Lemon	4 Cc.	1 fluidrachm.
Oil of Nutmeg	4 Cc.	1 fluidrachm.
Oil of Orange Flowers	4 Cc.	1 fluidrachm.
Oil of Cloves	3.5 Cc.	50 minims.
Oil of Cinnamon	3.5 Cc.	50 minims.
Balsam of Peru	10.5 Cc.	160 minims.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Oils and the Balsam of Peru in the Alcohol, let the solution stand a few days, if convenient, and then filter.

MISTURA OLEI PICIS.

Mixture of Oil of Tar

Mistura Picis Liquidæ. Tar Mixture.

	Metric.	*Apothecaries'.*
Purified Extract of Glycyrrhiza (N. F.)	65 Gm.	2 troy ounces.
Oil of Tar (U. S. P.)	35 Cc.	1 fluidounce.
Sugar	250 Gm.	8 troy ounces.
Chloroform (U. S. P.)	10 Cc.	150 minims.
Oil of Peppermint	3 Cc.	45 minims.
Alcohol	160 Cc.	5 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Add the Purified Extract of Glycyrrhiza and Sugar to 500 Cc. (or 16 fluidounces) of Water, contained in a covered vessel, and heat the mixture to boiling until the Extract and Sugar are dissolved. Then add the Oil of Tar, cover the vessel, and allow the contents to cool, stirring occasionally. Next add the Chloroform and Oil of Peppermint previously dissolved in the Alcohol, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces).

This mixture should be well agitated, whenever any of it is to be dispensed.

Average dose: 8 Cc. (2 fluidrachms).

MISTURA PECTORALIS, STOKES.

Stokes' Expectorant.

	Metric.	*Apothecaries'.*
Ammonium Carbonate	17.5 Gm.	256 grains.
Fluidextract of Senega (U. S. P.)	35 Cc.	1 fluidounce.
Fluidextract of Squill (U. S. P.)	35 Cc.	1 fluidounce.
Camphorated Tincture of Opium (U. S. P.)	175 Cc.	5 fluidounces.
Ammonia Water (U. S. P.), a sufficient quantity		
Water	85 Cc.	2½ fluidounces.
Syrup of Tolu (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Neutralize the Fluidextract of Squill with exactly sufficient Ammonia Water. To these add the Fluidextract of Senega, the Camphorated Tincture of Opium, and the Ammonium Carbonate, previously dissolved in the Water, and then sufficient Syrup of Tolu to make 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

MISTURA RHEI COMPOSITA.

Compound Mixture of Rhubarb.

Squibb's Rhubarb Mixture.

	Metric.	*Apothecaries'.*
Fluidextract of Rhubarb (U. S. P.)	12 Cc.	3 fluidrachms.
Fluidextract of Ipecac (U. S. P.)	2 Cc.	30 minims.
Sodium Bicarbonate	24 Gm.	350 grains.
Glycerin	250 Cc.	8 fluidounces.
Peppermint Water (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Bicarbonate in about 500 Cc. (or 16 fluidounces)

of Peppermint Water, then add the Fluidextracts and Glycerin, and lastly, enough Peppermint Water to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms.)

MISTURA SASSAFRAS ET OPII.

Mixture of Sassafras and Opium.

Mistura Opii Alkalina. Godfrey's Cordial.

	Metric.	*Apothecaries'.*
Oil of Sassafras	1 Cc.	15 minims.
Tincture of Opium (U. S. P.)	35 Cc.	1 fluidounce.
Alcohol	50 Cc.	1½ fluidounces.
Potassium Carbonate	8 Gm.	115 grains.
Molasses	325 Cc.	10 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Tincture of Opium with the Alcohol in which the Oil of Sassafras had previously been dissolved. Dissolve the Potassium Carbonate in about 500 Cc. (or 16 fluidounces) of Water, mix this with the Molasses, then add the mixture first prepared, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces). Allow the mixture to become clear by standing, then pour off the liquid portion and preserve it for use.

4 Cc. (1 fluidrachm) contain about 0.12 Cc. (2 minims) of Tincture of Opium, corresponding to about 0.013 Gm. (⅕ grain) of Opium.

Average dose: Infants, 0.65 Cc. (10 minims).

MISTURA SODÆ ET MENTHÆ.

Mixture of Soda and Spearmint.

Soda Mint.

	Metric.	*Apothecaries'.*
Sodium Bicarbonate	50 Gm.	1½ troy ounces.
Aromatic Spirit of Ammonia (U. S. P.)	10 Cc.	150 minims.
Spearmint Water (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Bicarbonate in about 750 Cc. (or 24 fluidounces) of Spearmint Water, add the Aromatic Spirit of Ammonia, and enough Spearmint Water to make 1000 Cc. (or 32 fluidounces). Filter.

Average dose: 8 Cc. (2 fluidrachms).

MISTURA SPLENETICA.

Splenetic Mixture.

Spleen Mixture. Gadberry's Mixture.

	Metric.	*Apothecaries'.*
Ferrous Sulphate	14 Gm.	200 grains.
Quinine Sulphate	14 Gm.	200 grains.
Nitric Acid (U. S. P.)	14 Cc.	200 minims.
Potassium Nitrate	42 Gm.	600 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Ferrous Sulphate, reduced to powder, with the Nitric Acid previous'y mixed with an equal volume of Water. When effervescence has ceased, warm the mixture gently, until it no longer evolves visible vapors of a yellowish tint. Then add to it the Quinine Sulphate, the Potassium Nitrate, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces). When solution has been effected, filter.

Average dose: 4 Cc. (1 fluidrachm).

MISTURA SULPHURICA ACIDA.

Sulphuric Acid Mixture.

Mixtura Sulphurica Acida (G. P.) **Haller's Acid Elixir.**

	Metric.	*Apothecaries'.*
Sulphuric Acid (U. S. P.)	250 Gm.	8 troy ounces.
Alcohol, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Add the Acid very gradually to 750 Gm. (or 24 troy ounces) of Alcohol, contained in a flask, agitating after each addition, and taking care that the temperature of the mixture be not allowed to rise above 50° C. (122° F.). When the mixture is cold, add enough Alcohol, if necessary, to make 1000 Gm. (or 32 troy ounces).

Average dose: 0.5 Cc. (8 minims).

Note.—The same product may be obtained, approximately, by carefully and slowly adding 1 volume of Sulphuric Acid to 7 volumes of Alcohol, and this method may be used when small quantities are required for immediate use in a prescription.

MUCILAGO CHONDRI.

Mucilage of Irish Moss.

	Metric.	*Apothecaries'.*
Irish Moss	30 Gm.	440 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Wash the Irish Moss with cold Water, then place it in a suitable vessel, add 1000 Cc. (or 32 fluidounces) of Water, and heat it, on a boiling water-bath, for fifteen minutes, frequently stirring. Then strain it through muslin, and pass enough Water through the strainer to make the liquid, when cold, measure 1000 Cc. (or 32 fluidounces).

Mucilage of Irish Moss may also be prepared in the following manner:

	Metric.	*Apothecaries'.*
Irish Moss Gelatin (N. F.)	20 Gm.	290 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Heat the Irish Moss Gelatin with 1000 Cc. (or 32 fluidounces) of Water, at a boiling temperature, until it is completely dissolved. Then allow the solution to cool, and add enough Water, if necessary, to make up the volume to 1000 Cc. (or 32 fluidounces).

Note.—Mucilage of Irish Moss, thus prepared, is well adapted for the preparation of emulsions of fixed oils. If it is, however, required for admixture with *clear* liquids, it should be diluted, when freshly made, and while still hot, with about 3 volumes of boiling water, filtered, and the filtrate evaporated to the volume corresponding to the proportions above given. The filtration may be greatly facilitated by filling the filter loosely with absorbent cotton, and pouring the liquid upon the latter.

Mucilage of Irish Moss may be preserved for some time by transferring it, while hot, into bottles, which should be filled to the neck then pouring a layer of Olive Oil on top, securely stoppering the bottles, and keeping them, in an upright position, in a cool place. When the Mucilage is wanted for use, the layer of oil may be removed by means of absorbent cotton.

MUCILAGO DEXTRINI.

Mucilage of Dextrin.

	Metric.	*Apothecaries'.*
Dextrin	335 Gm.	10 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix them in a tared vessel, and heat the mixture, with constant stirring, to near boiling, until the Dextrin is dissolved and a limpid liquid results. Then restore any loss of water by evaporation, strain the liquid through muslin, and allow it to cool short of gelatinizing, when it will be ready for immediate use.

Note.—If the Mucilage is not at once to be used for preparing emulsions or other mixtures, transfer it, while hot, to bottles, which should be filled to the neck. Then pour into each bottle a sufficient quantity of Olive Oil to form a protecting layer, and when the mucilage has gelatinized, securely cork the bottles, and keep them in a cool place, in an upright position.

When gelatinized Mucilage of Dextrin is to be used for the preparation of emulsions or for other mixtures, pour off the protecting layer of oil from the surface, remove the remainder of the oil by a pellet of absorbent cotton, and warm the bottle gently, until the Mucilage is liquefied. Then allow it to cool short of gelatinizing.

The kind of Dextrin suitable for this preparation is the commercial, *white* variety, provided it still contains some unaltered or only partially altered starch, and forms a jelly on cooling, when made into a mucilage after the formula above given. The yellow variety, which is completely soluble in about 2 parts of cold water, will not answer the purpose.

MUCILAGO SALEP.

Mucilage of Salep.

	Metric.	*Apothecaries'.*
Salep, in fine powder	10 Gm.	145 grains.
Cold Water	100 Cc.	3 fluidounces.
Boiling Water	900 Cc.	29 fluidounces.

Place the powdered Salep into a flask containing the Cold Water, and shake until the powder is divided. Then add the Boiling Water, and shake the mixture continuously until it has cooled to 25° C. (77° F.), or below this temperature. The cooling may be hastened by frequent and brief immersion of the flask in cold water.

Mucilage of Salep should be freshly made, when wanted for use.

Note.—If Sugar or Syrup is prescribed in the same mixture with Mucilage of Salep, it is preferable to triturate the required quantity of powdered Salep with either of the former, as the case may be, and then to add rapidly the proportionate amount of Boiling Water.

OLEA INFUSA.

Infused Oils.

The Dry Herb, in moderately coarse (No. 40) powder	200 parts.
Alcohol	150 parts.
Ammonia Water (U. S. P.)	4 parts.
Lard Oil	500 parts.
Cotton Seed Oil	500 parts.

Moisten the powdered Herb with a sufficient quantity of the Alcohol and Ammonia Water previously mixed, then pack it tightly into a stone or enamelled iron vessel of suitable capacity, pour on the remainder of the ammoniated Alcohol, cover it well, and allow the mixture to macerate for twenty-four hours. Then add 120 parts of the mixed Oils, digest, with frequent agitation, during twelve hours, at a a temperature between 50° and 60° C. (122° to 140° F.), transfer the mixture to a strainer, and express strongly. To the residue, returned

to the vessel, add the remainder of the Oils, digest and express in the same manner, and unite the expressed portions.

Note.—This process is a modification of that prescribed by the *G. P.* The Alcohol and free ammonia are dissipated during the digestion. Infused Oils are usually prepared only from so-called narcotic plants, but it is known that only a portion of their active constituents is taken up by the oil. The above process is to be used for the preparation of *Oleum Hyoscyami* of the G. P. and similar infused oils.

OLEATUM ACONITINÆ.

Oleate of Aconitine.

	Metric.	*Apothecaries'.*
Aconitine (U. S. P.)	2 Gm.	30 grains.
Oleic Acid (U. S. P.)	98 Gm.	1470 grains.

Triturate the Aconitine with a small portion of the Oleic Acid in a mortar, then incorporate the remainder of the Oleic Acid, and stir the mixture frequently until the alkaloid is dissolved.

Note.—The market affords a variety of Aconitines made by different processes, by different manufacturers, and of greatly different potency. Only the pure crystallized alkaloid, having all the characters demanded by the U. S. P., should be used.

Caution.—Oleate of Aconitine should never be applied with the unprotected hand or fingers. A pencil or mop should be used.

OLEATUM ZINCI.

Zinc Oleate.

	Metric.	*Apothecaries'.*
Zinc Acetate, crystallized	115 Gm.	3½ troy ounces.
Solution of Sodium Oleate (N. F.)	5000 Cc.	160 fluidounces.
Water, a sufficient quantity		

Dissolve the Zinc Acetate in 10,000 Cc. (or 320 fluidounces) of cold Water, filter the solution, if necessary, through a pellet of absorbent cotton placed in the neck of a funnel, and mix it slowly, and with constant stirring, with the Solution of Sodium Oleate. Transfer the mixture to a wetted muslin strainer, and when the liquid has drained off, wash the precipitate with Water, until the washings are practically tasteless. Lastly, dry the precipitate, spread on paper, by exposure to dust-free air, without heat.

The product contains an amount of Zinc corresponding to about 13 per cent. of Zinc Oxide.

Note.—The theoretical yield of Zinc Oleate obtainable from 115 grammes of Zinc Acetate is 287.5 grammes; in practice, about 265 grammes will be obtained. Zinc Oleate, prepared by the above process, is in the form of a soft, white powder and may be converted into a plaster or ointment by mixing it with such a proportion of oleic acid as may be required.

OLEOSACCHARA.

Oil-Sugars.

Elæosaccharа (G. P.).

	Metric.	*Apothecaries'.*
Any Volatile Oil	1 Drop.	1 drop.
Sugar	2 Gm.	30 grains.

Triturate the Sugar with the Volatile Oil to a fine powder.

This preparation should be freshly made, when wanted for use.

Note.—When *Elæosaccharum Anisi, E. Fœniculi, E. Menthæ Piperitæ*, etc., etc., are prescribed, these are to be prepared from the corresponding essential oils, according to the above formula.

OLEUM CARBOLATUM.

Carbolized Oil.

Carbolic Acid (Phenol, U. S. P.)	5 parts.
Cotton Seed Oil	95 parts.

Melt the Carbolic Acid with a gentle heat, and mix it with the Cotton Seed Oil.

OLEUM HYOSCYAMI COMPOSITUM.

Compound Oil of Hyoscyamus.

Balsamum Tranquillans.

	Metric.	*Apothecaries'.*
Oil of Absinth, Oil of Lavender, Oil of Rosemary, Oil of Sage, Oil of Thyme, of each	2 Drops.	2 drops.
Infused Oil of Hyoscyamus (N. F.)	100 Cc.	3 fluidounces.

Mix them.

Note.—Oil of Absinth is the volatile oil of *Artemisia Absinthium* Linné. (Wormwood), and Oil of Sage is the volatile oil of *Salvia officinalis* Linné. Infused Oil of Hyoscyamus is the *Oleum Hyoscyami* of the G. P. (see p. 116). The *Baumé Tranquille* (*Balsamum tranquillans*) of the Codex is a more complex preparation, not identical with the above, but possessing about the same properties.

OXYMEL SCILLÆ.

Oxymel of Squill.

	Metric.	*Apothecaries'.*
Vinegar of Squill (U. S. P.)	50 Gm.	1½ troy ounces.
Honey	100 Gm.	3 troy ounces.

Mix them in a tared porcelain capsule or enamelled iron vessel, and

apply the heat of a water-bath until the mixture has been reduced to the weight of 100 Gm. (or 3 troy ounces). Then strain, allow it to cool, and transfer it to bottles, which should be well corked.

Average dose : 4 Cc. (1 fluidrachm).

PASTÆ DERMATOLOGICÆ.

Dermatologic Pastes.

Dermatologic Pastes are medicaments for external use, suggested in the practice of noted Dermatologists (Lassar, Unna, and others). They are ointment-like mixtures of Starch, Dextrin, Zinc Oxide, Sulphur, or Calcium Carbonate, made into a paste with Glycerin, Soft Soap, Petrolatum, Lard or other Fat, medicated with antiseptic and astringent agents. The following formulas may serve as examples :

1. Pasta Dextrinata. "Dextrinated Paste."

Dextrin	10 parts.
Glycerin	10 parts.
Distilled Water, a sufficient quantity	
To make	30 parts.

Dissolve the Dextrin in the Glycerin and 10 parts of Water by heat, and add sufficient Water, if necessary, to make 30 parts.

Note.—This is a general vehicle for many medicated pastes used in dermatology.

2. Pasta Ichthyoli, Unna. "Unna's Ichthyol Paste."

Ammonium Ichthyolsulphonate	10 parts.
Dextrinated Paste	30 parts.

Mix them.

3. Pasta Naphtholi, Lassar. "Lassar's Naphthol Paste."

Betanaphthol (U. S. P.), in very fine powder	10 parts.
Precipitated Sulphur (U. S. P.)	50 parts.
Petrolatum (U. S. P.)	20 parts.
Soft Soap (U. S. P.)	20 parts.

Triturate the Betanaphthol and Sulphur, with the Petrolatum and then incorporate the Soft Soap with the mixture.

4. Pasta Resorcini Mitis, Lassar. "Lassar's Mild Resorcin Paste."

Resorcinol (U. S. P.)	10 parts.
Zinc Oxide	25 parts.
Starch	25 parts.
Liquid Petrolatum (U. S. P.)	40 parts.

Thoroughly levigate the Zinc Oxide with sufficient of the Liquid Petrolatum to make a thin paste. Reduce the Resorcin to a very fine

powder, mixed with the Starch and add the mixture to the Zinc Oxide paste, triturating until a uniformly smooth mixture is obtained. Then add the remainder of the Liquid Petrolatum, and incorporate it thoroughly.

5. Pasta Zinci, Lassar. "Lassar's Zinc-Salicyl Paste."

Salicylic Acid, in fine powder	2 parts.
Zinc Oxide	24 parts.
Starch	24 parts.
White Petrolatum (U. S. P.)	50 parts.

Thoroughly levigate the Zinc Oxide with a portion of the Petrolatum; then add the Salicylic Acid, the Starch, and the remaining Petrolatum, and triturate until a perfectly smooth mixture is obtained.

6. Pasta Zinci Mollis, Unna. "Unna's Soft Zinc Paste."

Zinc Oxide	10 parts.
Calcium Carbonate	10 parts.
Linseed Oil	10 parts.
Lime Water	10 parts.

Thoroughly levigate the Zinc Oxide and the Calcium Carbonate with the Linseed Oil, gradually added, so as to form a perfectly smooth mixture, then incorporate the Lime Water by trituration.

7. Pasta Zinci Sulfurata, Unna. "Unna's Sulphurated Zinc Paste."

Zinc Oxide	15 parts.
Precipitated Sulphur (U. S. P.)	10 parts.
Silicic Acid	5 parts.
Benzoinated Lard (U. S. P.)	70 parts.

Thoroughly levigate the Zinc Oxide with a small portion of the Benzoinated Lard; the Silicic Acid with another, and the Precipitated Sulphur with a third portion. Mix the three portions until a uniformly smooth mixture results, and thoroughly incorporate the remainder of the Benzoinated Lard.

PEPSINUM AROMATICUM.

Aromatic Pepsin.

	Metric	*Apothecaries'.*
Saccharated Pepsin (N. F. Appendix)	97 Gm.	3 troy ounces.
Aromatic Fluidextract (U. S. P.)	6 Cc.	90 minims.
Tartaric Acid	1.5 Gm.	25 grains.
Sodium Chloride	1.5 Gm.	25 grains.

Mix the ingredients by trituration, dry the product by exposure to warm air, and keep it in well-stoppered bottles.

Average dose: 2 Gm. (30 grains).

PETROLATUM SAPONATUM LIQUIDUM.

Liquid Saponated Petrolatum.

"Liquid Petrox."

Liquid Petrolatum (U. S. P.)	100 parts.
Oleic Acid (U. S. P.)	50 parts.
Spirit of Ammonia (U. S. P.)	25 parts.

Mix them by agitation.

Note.—A yellow, oily liquid, in which Iodine, Salol, Salicylic Acid, and many of the Alkaloids dissolve readily; which readily mixes with Chloroform and with Volatile Oils, and which forms a permanent emulsion with Water, in almost any proportion, before and after such addition.

PETROLATUM SAPONATUM SPISSUM.

Solid Saponated Petrolatum.

"Solid Petrox."

Petrolatum (U. S. P.)	100 parts.
Oleic Acid (U. S. P.)	50 parts.
Spirit of Ammonia (U. S. P.)	25 parts.

Melt the Petrolatum on the water-bath, add the Oleic Acid, and stir the mixture until it has cooled almost to the point of congealing; then add the Spirit of Ammonia while stirring, and continue to stir until the mixture is cold.

Note.—This has all the properties of Liquid Saponated Petrolatum (N. F.), except consistency, and affords an admirable base for ointments.

PILULÆ.

Pills.

Pills are round, oval or ovoid forms of medicinal substances, massed by the aid of judiciously selected excipients, and weighing not less than 0.06 Gm. (1 grain), nor more than 0.5 Gm. (8 grains). If they weigh less than 0.06 Gm. (1 grain), and not more than 0.02 Gm. (⅓ grain), they are known as "Granules;" if below the latter in weight, they are usually designated as "Parvules."

In their simplest form, pills are prepared as required, and dispensed with sufficient dusting powder to prevent them from adhering while moist; but if they are prepared for stock, or if it is desirable to mask their taste, or for other reasons, they may be coated with some suitable substance that will readily dissolve or disintegrate in the juices of the stomach (Sugar, Gelatin, Chocolate, Tolu, Silver). In some cases, however, it is desirable to coat the pills with a material which, while

insoluble in the acid contents of the stomach (*Saloi*, *Keratin*, etc.) dissolves readily in the alkaline fluids of the intestines. In this reference, pill-coatings may therefore be divided into two principal forms, viz., coatings for "Ordinary Pills" and coatings for "Enteric Pills."

1. Ordinary Pill-Coating.

a. Gelatin-Coating.—The pills, freed from dusting-powder, may be dipped in a warm solution of Gelatin, the excess removed, and allowed to dry. In extemporaneous pharmacy, it may be convenient to roll the pills into cylindrical shape and to insert them into Gelatin Capsules, of suitable size, so as to completely fill them; observing that here also the dusting-powder is completely removed.

b. Sugar-Coating.—The pills, freed from dusting-powder, may be quickly rolled on a filter-paper saturated with Mucilage of Acacia, until uniformly but superficially moist, then immediately transferred to a porcelain capsule containing a mixture of 8 parts of powdered Milk Sugar and 2 parts of powdered Acacia, and rapidly rotated until covered with a firm, white coating.

c. Cacao-Coating.—The pills, freed from dusting-powder, may be quickly rolled on a filter paper saturated with Mucilage of Acacia, until uniformly but superficially moist, then immediately shaken with Cacao powder until well coated, transferred to a clean, warmed porcelain capsule, and rapidly rotated until a smooth coating is produced.

d. Tolu-Coating.—The pills, freed from dusting-powder, may be dropped into the lid of a porcelain ointment jar (or a porcelain capsule) into which a thin layer of Ethereal Tincture of Tolu (N. F.) has previously been placed, and rotated until thoroughly coated with the Tincture. They are then turned into another lid (or capsule) of the same kind and size, and rotated for a few moments to remove the excess of Tincture, and while the pills are still shining, but not too moist, they are transferred to and rotated until dry in a third lid (or capsule), previously coated with a very thin layer of oil, which has been applied by merely the tips of the fingers. A second or third coating may be applied in the same manner, if necessary.

e. Silver-Coating.—The pills, preferably coated with Tolu (as described under *d*) if moist, are dropped into the lid of a porcelain ointment jar, into which a very thin layer of a mixture composed of equal parts Alcohol, Syrup, Mucilage of Acacia and Water

has been p'aced, and they are rotated until they have acquired a thin coat of this mixture. They are then dropped into a one-pound ointment jar, containing the requisite quantity of Silver-foil (determined by experience), and the jar is rapidly rotated until the pills are thoroughly coated. This coating may be brightened, by transferring the pills to a second jar, containing a few leaves of Silver-foil, and shaking for some time until thoroughly polished.

2. Enteric Pill-Coating.

a. Keratin-Coating.—The pills, which should not be massed with an aqueous incipient, may be dipped into melted Cacao butter, rolled in finely powdered Charcoal, then sprinkled with a suitable quantity of solution of Keratin, and rotated until dry. The sprinkling and drying are repeated several times, until a sufficiently thick coating of Keratin is obtained.

b. Salol-Coating.—The pills, carefully freed from dusting-powder, are dropped into a capsule containing enough Salol (approximately 0.06 Gm. (1 grain) to every 0.12 Gm. (3 grains) pill), previously melted by the heat of a water-bath and allowed to cool so that by passing the hand along the bottom of the dish there is scarcely any warmth felt, and the capsule is then rotated until the pills are coated and the Salol has congealed. This process is repeated twice, each time reducing the Salol about one half. Finally, a finishing coat is applied by using only sufficient Salol to coat the dish when melted; the dish being now kept quite warm (almost hot), the pills rotated quite rapidly until they are quite shiny, then turned into a cool dish, and the rotation continued until the pills are quite cool.

In giving the following formulas for Pills, the quantities of the several ingredients required for *one hundred* (*100*) *pills* are given in Metric Weights, while the quantities required for a *single pill* are given in Apothecaries' Weights. When it is desirable to prepare a number of pills by the proportions given for the *single pill*, it is recommended that upon multiplying by the number of pills required, the nearest whole number, or nearest convenient fraction, in each case, be chosen.

PILULÆ AD PRANDIUM.

Dinner Pills.

1. When "Dinner Pills," under this or some other equivalent name, are prescribed without further specification, it is recommended that the *Pilulæ Aloes et Mastiches* of the U. S. P., also called Lady Webster's Dinner Pills, be dispensed.

Note.—Of other combinations, bearing similar names, or used for similar purposes, the following appear to be those most commonly in use:

2. Chapman's Dinner Pill.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Purified Aloes (U. S. P.)	9.7 Gm.	1½ grains.
Mastic	9.7 Gm.	1½ grains.
Ipecac, in fine powder	6.5 Gm.	1 grain.
Oil of Fennel	1.5 Cc.	about ¼ minim.

3. Cole's Dinner Pill.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Purified Aloes (U. S. P.)	7.8 Gm.	1⅕ grains.
Mass of Mercury (U. S. P.)	7.8 Gm.	1⅕ grains.
Jalap, in fine powder	7.8 Gm.	1⅕ grains.
Antimony and Potassium Tartrate	0.13 Gm.	$\frac{1}{50}$ grain.

4. Hall's Dinner Pill.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Purified Aloes (U. S. P.)	6.5 Gm.	1 grain.
Extract of Glycyrrhiza	6.5 Gm.	1 grain.
Soap, in powder	6.5 Gm.	1 grain.
Molasses	6.5 Gm.	1 grain.

PILULÆ ALOES ET PODOPHYLLI COMPOSITÆ.

Compound Pills of Aloes and Podophyllum.

Janeway's Pills.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Purified Aloes (U. S. P.)	6.5 Gm.	1 grain.
Resin of Podophyllum (U. S. P.)	3.25 Gm.	½ grain.
Extract of Belladonna Leaves (U. S. P.)	1.6 Gm.	¼ grain.
Extract of Nux Vomica (U. S. P.)	1.6 Gm.	¼ grain.

PILULÆ ALOINI COMPOSITÆ.

Compound Pills of Aloin.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Aloin	3.25 Gm.	½ grain.
Resin of Podophyllum (U. S. P.)	0.8 Gm.	⅛ grain.
Extract of Belladonna Leaves (U. S. P.)	1.6 Gm.	¼ grain.

PILULÆ ALOINI, STRYCHNINÆ ET BELLADONNÆ.

Pills of Aloin, Strychnine and Belladonna.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Aloin	1.3 Gm.	⅕ grain.
Strychnine, alkaloid	0.05 Gm.	$\frac{1}{120}$ grain.
Extract of Belladonna Leaves (U. S. P.)	0.8 Gm.	⅛ grain.

Note.—These pills are also prepared with double the amount of Strychnine. It is recommended that the stronger pills be dispensed only when specially demanded.

PILULÆ ALOINI, STRYCHNINÆ ET BELLADONNÆ COMPOSITÆ.

Compound Pills of Aloin, Strychnine and Belladonna.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Aloin	1.3 Gm.	$\frac{1}{5}$ grain.
Strychnine, alkaloid	0.05 Gm.	$\frac{1}{120}$ grain.
Extract of Belladonna Leaves (U. S. P.)	0.8 Gm.	$\frac{1}{8}$ grain.
Extract of Rhamnus Purshiana	3.25 Gm.	$\frac{1}{2}$ grain.

Note.—If Extract of Rhamnus Purshiana is not available, take Fluidextract of Rhamnus Purshiana (U. S. P.), and evaporate it, on a water-bath, to a pilular consistence.

These pills are also prepared with double the amount of Strychnine. It is recommended that the stronger pills be dispensed only when specially demanded.

PILULÆ ANTIDYSPEPTICÆ.

Antidyspeptic Pills.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Strychnine, alkaloid	0.16 Gm.	$\frac{1}{40}$ grain.
Ipecac, in fine powder	0.65 Gm.	$\frac{1}{10}$ grain.
Extract of Belladonna Leaves (U. S. P.)	0.65 Gm.	$\frac{1}{10}$ grain.
Mass of Mercury (U. S. P.)	13 Gm.	2 grains.
Compound Extract of Colocynth (U. S. P.)	13 Gm.	2 grains.

PILULÆ ANTINEURALGICÆ.

Antineuralgic Pills.

1. Gross' Antineuralgic Pills.	*Metric.* 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Quinine Sulphate	13 Gm.	2 grains.
Morphine Sulphate	0.32 Gm.	$\frac{1}{20}$ grain.
Strychnine, alkaloid	0.22 Gm.	$\frac{1}{30}$ grain.
Arsenic Trioxide (U. S. P.)	0 32 Gm.	$\frac{1}{20}$ grain.
Extract of Aconite Leaves (U. S. P., 1870)	3.2 Gm.	$\frac{1}{2}$ grain.

Note.—When "Antineuralgic Pills," or "Neuralgia Pills," without other specification, are prescribed, it is recommended that the above preparation be dispensed. Sometimes the Morphine Sulphate is directed to be omitted.

2. Brown Séquard's Antineuralgic (or Neuralgic) Pills.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Extract of Hyoscyamus (U. S. P.)	4.5 Gm.	$\frac{2}{3}$ grain.
Extract of Conium (N. F. Appendix)	4.5 Gm.	$\frac{2}{3}$ grain.
Extract of Ignatia (U. S. P., 1870)	3.2 Gm.	$\frac{1}{2}$ grain.
Extract of Opium (U. S. P.)	3.2 Gm.	$\frac{1}{2}$ grain.
Extract of Aconite Leaves (U. S. P., 1870)	2.2 Gm.	$\frac{1}{3}$ grain.
Extract of Indian Cannabis (U. S. P.)	1.6 Gm.	$\frac{1}{4}$ grain.
Extract of Stramonium (U. S. P.)	1.3 Gm.	$\frac{1}{5}$ grain.
Extract of Belladonna Leaves (U. S. P.)	1.1 Gm.	$\frac{1}{6}$ grain.

PILULÆ ANTIPERIODICÆ.

Antiperiodic Pills.

Warburg's Pills.

1. *With Aloes:*	*Metric.* 100 *pills contain*	*Apothecaries'.* 1 *pill cantains*
Extract of Aloes (U. S. P.)	6.5 Gm.	1 grain.
Rhubarb	3.2 Gm.	$\frac{1}{2}$ grain.
Angelica, seed	3.2 Gm.	$\frac{1}{2}$ grain.
Elecampane	1.6 Gm.	$\frac{1}{4}$ grain.
Saffron	1.6 Gm.	$\frac{1}{4}$ grain.
Fennel	1.6 Gm.	$\frac{1}{4}$ grain.
Zedoary, root	0.8 Gm.	$\frac{1}{8}$ grain.
Cubebs	0.8 Gm.	$\frac{1}{8}$ grain.
Myrrh	0.8 Gm.	$\frac{1}{8}$ grain,
White Agaric	0.8 Gm.	$\frac{1}{8}$ grain.
Camphor	0.8 Gm.	$\frac{1}{8}$ grain.
Quinine Sulphate	9.0 Gm.	$1\frac{2}{5}$ grains.
Extract of Gentian (U. S. P.), a sufficient quantity		a sufficient quantity.

Reduce the drugs to a fine, uniform powder, and make this into pills, by means of Extract of Gentian, in accordance with the formula above given.

2. *Without Aloes:*

Prepare the pills in the same manner as directed in the previous formula, but omit the Extract of Aloes.

Note.—These pills have been introduced for the purpose of facilitating the administration of Warburg's Tincture in a solid form. When "Warburg's Pills," or "Pills of Warburg's Tincture" are prescribed, without further specification, those containing Aloes should be dispensed. Those without Aloes should be furnished only when they are expressly demanded.

Each Warburg's Pill represents about 1 fluidrachm of Warburg's Tincture, with or without aloes, respectively (see *Tinctura Antiperiodica*, N. F.).

PILULÆ COLOCYNTHIDIS COMPOSITÆ.

Compound Pills of Colocynth.

Pilulæ Cocciæ. Cochia Pills.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Extract of Colocynth (U. S. P.)	1.1 Gm.	$\frac{1}{6}$ grain.
Purified Aloes (U. S. P.)	13 Gm.	2 grains.
Resin of Scammony (U. S. P.)	13 Gm.	2 grains.
Oil of Cloves	1.5 Cc.	$\frac{1}{4}$ minim.

Note.—The *Pilula Colocynthidis Composita* of the B. P., for which the above is an equivalent, is prepared with Colocynth Pulp, and contains Potassium Sulphate, which was originally added as an aid to reduce the ingredients to powder. With the use of Extract of Colocynth, this becomes unnecessary.

The B. P. directs the above to be kept as a pill mass, to be made into pills of such weight as may be prescribed. When such specification is omitted, it is recommended to dispense pills containing the quantities above directed.

PILULÆ COLOCYNTHIDIS ET HYOSCYAMI.

Pills of Colocynth and Hyoscyamus.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Extract of Colocynth (U. S. P.)	0.65 Gm.	$\frac{1}{10}$ grain.
Purified Aloes (U. S. P.)	9.7 Gm.	$1\frac{1}{2}$ grains.
Resin of Scammony (U. S. P.)	9.7 Gm.	$1\frac{1}{2}$ grains.
Oil of Cloves	1 Cc.	$\frac{1}{6}$ minim.
Extract of Hyoscyamus (U. S. P.)	9.7 Gm.	$1\frac{1}{2}$ grains.

Note.—The *Pilula Colocynthidis et Hyoscyami* of the B. P. is directed to be made by mixing 2 parts of Compound Pill of Colocynth (N. F.), with 1 part of Extract of Hyoscyamus, and is directed to be kept as a pill-mass, to be made into pills of such weight as may be directed. When such specification is omitted, it is recommended to dispense pills containing the quantities above directed.

PILULÆ COLOCYNTHIDIS ET PODOPHYLLI.

Pills of Colocynth and Podophyllum.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Compound Extract of Colocynth (U. S. P.)	16.2 Gm.	$2\frac{1}{2}$ grains.
Resin of Podophyllum (U. S. P.)	1.6 Gm.	$\frac{1}{4}$ grain.

PILULÆ LAXATIVÆ POST PARTUM.

Laxative Pills after Confinement.

Barker's Post Partum Pills.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Compound Extract of Colocynth (U. S. P.)	11 Gm.	$1\frac{2}{3}$ grains.
Purified Aloes (U. S. P.)	5.5 Gm.	$\frac{5}{6}$ grain.
Extract of Nux Vomica (U. S. P.)	2.5 Gm.	$\frac{5}{12}$ grain.
Resin of Podophyllum (U. S. P.)	0.5 Gm.	$\frac{1}{12}$ grain.
Ipecac, in fine powder	0.5 Gm.	$\frac{1}{12}$ grain.
Extract of Hyoscyamus (U. S. P.)	8.0 Gm.	$1\frac{1}{4}$ grains.

Note.—This is the formula generally employed by Dr. Fordyce Barker, except where special circumstances render modifications necessary. The formula usually quoted in manufacturers' lists and some formularies is not correct.

PILULÆ GLONOINI.

Pills of Glonoin.

Pills of Nitroglycerin.

	Metric.	*Apothecaries'.*
Spirit of Glyceryl Trinitrate (U. S. P.)	6.5 Gm.	100 grains.
Althæa, in fine powder	6.5 Gm.	100 grains.
Confection of Rose (U. S. P.), a sufficient quantity.		

Mix the Spirit of Glyceryl Trinitrate intimately with the powdered Althæa, expose the mixture for a short time to the air, so that the alcohol may evaporate, then make a pill-mass by means of Confection of Rose, and divide it into 100 *pills*.

Each pill contains 0.0006 Gm. ($\frac{1}{100}$ grain) of Glonoin (Nitroglycerin).

PILULÆ METALLORUM.

Metallic Pills.

Pilulæ Metallorum Amaræ. Bitter Metallic Pills.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Reduced Iron	6.5 Gm.	$\frac{1}{4}$ grain.
Quinine Sulphate	6.5 Gm.	1 grain.
Strychnine, alkaloid	0.32 Gm.	$\frac{1}{20}$ grain.
Arsenic Trioxide (U. S. P.)	0.32 Gm.	$\frac{1}{20}$ grain.

Note.—A similar combination is known under the name of *Aitken's Tonic Pills:*

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Reduced Iron	4.5 Gm.	$\frac{3}{4}$ grain.
Quinine Sulphate	6.5 Gm.	1 grain.
Strychnine, alkaloid	0.13 Gm.	$\frac{1}{50}$ grain.
Arsenic Trioxide (U. S. P.)	0.13 Gm.	$\frac{1}{50}$ grain.

PILULÆ OPII ET CAMPHORÆ.

Pills of Opium and Camphor.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Powdered Opium	6.5 Gm.	1 grain.
Camphor	13 Gm.	2 grains.

PILULÆ OPII ET PLUMBI.

Pills of Opium and Lead.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Powdered Opium	6.5 Gm.	1 grain.
Lead Acetate	6.5 Gm.	1 grain.

PILULÆ QUADRUPLICES.

Quadruplex Pills.

Quatuor Pills. Pilulæ Ferri et Quininæ Compositæ.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Dried Ferrous Sulphate	6.5 Gm.	1 grain.
Quinine Sulphate	6.5 Gm.	1 grain.
Purified Aloes (U. S. P.)	6.5 Gm.	1 grain.
Extract of Nux Vomica (U. S. P.)	1.6 Gm.	¼ grain.
Extract of Gentian (U. S. P.), a sufficient quantity.		a sufficient quantity.

PILULÆ TRIPLICES.

Triplex Pills.

Pilula Triplex.

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
1. Purified Aloes (U. S. P.)	13 Gm.	2 grains.
Mass of Mercury (U. S. P.)	6.5 Gm.	1 grain.
Resin of Podophyllum (U. S. P.)	1.6 Gm.	¼ grain.

Note.—When *Pilula Triplex*, under this name, or some equivalent, is prescribed without further specification, it is recommended that the above preparation be dispensed. A formula devised by Dr. John W. Francis is also in use:

2. Francis' Triplex Pills.	*Metric.* 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Purified Aloes (U. S. P.)	5.5 Gm.	⅚ grain.
Scammony	5.5 Gm.	⅚ grain.
Mass of Mercury (U. S. P.)	5.5 Gm.	⅚ grain.
Croton Oil	0.32 Cc.	1/20 minim.
Oil of Caraway	1.6 Cc.	¼ minim.
Tincture of Aloes and Myrrh (U. S. P.), a sufficient quantity.		a sufficient quantity.

PULVERES.

Powders.

Powders, divided in the prescribed doses, may be dispensed enwrapped in paper, enclosed in capsules, or formed into tablets, according to requirements and the direction of the prescriber, under the following definitions :

1. *Pulveres in Chartulis*—Powders in Papers.—Powders or triturations accurately divided in doses, *by weighing*, enwrapped in paper. If deliquescent or volatile, parchment or paraffin paper should be used and the powder dispensed in air-tight containers.

2. *Pulveres in Capsulis Amylaceis*—Powders in Starch Capsules, Cachets or Wafers.—Powders or Triturations accurately divided, *by weighing*, and enclosed in capsules (or cachets) prepared from starch paste, pressed into concentric forms and dried—the two forms composing the capsule (or cachet) to be very carefully sealed or cemented together.

3. *Pulveres in Capsulis Gelatini*—Powders in Gelatin Capsules.—Powders or Triturations accurately divided, *by weighing*, and filled into hard capsules of gelatin. If desirable, these may be hermetically sealed by placing the caps on filter paper saturated with water, for a few moments, and then slipping the cap on the capsule in the usual way; then exposing the capsules a few minutes to the air so that they may become dry before dispensing them.

4. *Pulveres in Tablettis* (*Tablettæ Orales*)—Tablet Triturates.—Triturations of medicinal substances with Milk Sugar as diluent, made into a paste with Alcohol of greater or less strength, depending on the nature of the medicinal ingredient, and formed into disks, usually not exceeding 0.1 Gm. (1½ grains) in weight, by pressing the mass into molds of hard rubber or suitable metal and exposing the moist disks to the air so that the Alcohol may be completely volatilized spontaneously.

PULVERES EFFERVESCENTES.

Effervescent Powders.

The Effervescent Powders for which formulas are given in the Formulary are most conveniently and efficiently dispensed in the form of *fine powders*, because in this condition they can be made extemporaneously and with an assurance of their freshness and efficiency. The popular demand, however, seems to be for Granular Effervescent Powders, the preparation of which requires certain modifications of the formulas, important only in so far as they enable the dispenser to granulate the powder in a convenient and expeditious manner.

General Observations and Directions.

Effervescent Powders are composed of the medicinal agent in admixture with an alkaline bicarbonate, an organic acid, and sugar. The proportion of the medicinal agent is dependent upon its dose; that of the alkaline bicarbonate and of the organic acid is dependent upon their molecular relation to each other; while the proportion of sugar is dependent upon the quantity necessary as a sweetening agent and diluent.

The ingredients for making the *fine pulverent form* of Effervescent Powders are: The Medicinal Agent, Sodium Bicarbonate, Tartaric Acid, and Sugar, and it is necessary that these be well dried before mixing them.

To make the *granular form* of Effervescent Powders the ingredients need not be dried, unless specially directed, and the ingredients are the same as for the pulverulent form, with the single *exception that one-half the molecule of Tartaric Acid is replaced by one-half a molecule of Crystallized Citric Acid.*

With the view to simplifying the formulas for Effervescent Powders, three new preparations have been embodied in this Formulary, viz.:

Acidum Citricum Saccharatum (p. 2).

Acidum Tartaricum Saccharatum (p. 3).

Sodii Bicarbonas Saccharatus (p. 142).

The proportion of Sugar in these new Saccharates is so adjusted that when either of the Acid Saccharates is mixed with an equal weight of the Alkaline Saccharate, the acid and alkali are in molecular relation to each other, and, when dissolved in Water, will form the Neutral Tartrate and Citrate of Sodium respectively.

With these three Saccharates in stock it becomes possible to make Effervescent Powders quickly with any medicinal agent that may be prescribed, while they simplify the formulas for the Effervescent preparations now in the Formulary, their use being exemplified by the following *General Formulas:*

General Formulas.

Formula A. Fine Powder.

Medicinal Agent, in fine powder	50 parts.
Saccharated Sodium Bicarbonate (N. F.)	475 parts.
Saccharated Tartaric Acid (N. F.)	475 parts.

Triturate the ingredients, *previously well-dried*, until a uniformly mixed powder is obtained.

Formula B. Granular Powder.

Medicinal Agent, in fine powder	50	parts.
Saccharated Sodium Bicarbonate (N. F.)	475	parts.
Saccharated Tartaric Acid (N. F.)	237.5	parts.
Saccharated Citric Acid (N. F.)	237.5	parts.

Mix the ingredients in a mortar, transfer them to an evaporating dish, and heat upon a water-bath, kept at 60°–71° C. (140°–160° F.), under constant stirring with a wooden spatula, until dry and uniformly granular.

The Saccharated Citric Acid, being made from crystallized Citric Acid containing one molecule of Water of Crystallization, supplies the moisture necessary to cause the powder, when heated, to cake and adhere together. If the somewhat pasty mass is then stirred with the spatula, small granules are readily formed, and these become firm when completely dried.

Throughout this process the contact of the powder with metals should be carefully avoided.

Effervescent Powders should be preserved in well-stoppered wide-mouthed vials.

Note.—To make these Effervescent Compounds it is not necessary to have the Saccharated Alkali and Saccharated Acids in stock. The quantities of Sodium Bicarbonate, of Tartaric Acid, of Citric Acid, and of Sugar, required for each formula are readily ascertained by simple calculation, according to the following rule:

Multiply the number of grammes of the Saccharate prescribed by the figures indicating the percentage of alkali or acid it contains, and divide the sum of this by one hundred. The quotient is the quantity of Alkali or Acid expressed in grammes, and by deducting this quantity from the total quantity of the Saccharate, the quantity of Sugar necessary is ascertained.

Applying this rule, by way of example, to *General Formula B.*, we have the following result:

1. 475 parts of Saccharated Sodium Bicarbonate, containing 75% require 356.25 parts of Sodium Bicarbonate and 118.75 parts of Sugar.

2. 237.5 parts of Saccharated Tartaric Acid, containing 67.5 %, require 160.3 parts of Tartaric Acid and 77.2 parts of Sugar.

3. 237.5 parts of Saccharated Citric Acid, containing 62.5 %, require 148.4 parts of Citric Acid and 89.1 parts of Sugar.

And the formula would then be:

Medicinal Agent	50	parts.
Sodium Bicarbonate	356.25	parts.
Tartaric Acid	160.3	parts.
Citric Acid	148.4	parts.
Sugar	285.05	parts.
To make	1000	parts.

PULVIS ACACIÆ COMPOSITUS.

Compound Powder of Acacia.

Pulvis Gummosus (G. P.)

Acacia, in fine powder	50 parts.
Glycyrrhiza, in fine powder	34 parts.
Sugar, in fine powder	16 parts.

Mix them intimately.

PULVIS ALOES ET CANELLÆ.

Powder of Aloes and Canella.

"Hiera Picra."

Purified Aloes (U. S. P.), in fine powder	80 parts.
Canella, in fine powder	20 parts.

Mix them intimately.

Average dose: 1 Gm. (15 grains).

PULVIS AMYGDALÆ COMPOSITUS.

Compound Powder of Almond.

Sweet Almond	60 parts.
Sugar, in fine powder	30 parts.
Acacia, in fine powder	10 parts.

Blanch the Sweet Almond, then dry them thoroughly with a soft cloth, and rub them lightly in a mortar, until they form a mass of a smooth consistence. Mix the Acacia and Sugar, add them to the mass previously prepared, and rub the whole to a coarse powder, which is to be preserved in a closely covered jar.

Note.—If 53 Gm. (820 grains) of this preparation be thoroughly triturated with 530 Cc. (17 fluidounces) of Water, gradually added, and the mixture finally strained, the product will be about 500 Cc. (16 fluidounces) of *Emulsum Amygdalæ* (U. S. P.).

PULVIS ANTICATARRHALIS.

Catarrh Powder.

Catarrh Snuff.

	Metric.	*Apothecaries'.*
Morphine Hydrochloride	0.41 Gm.	6½ grains.
Acacia, in fine powder	25 Gm.	¾ troy ounce.
Bismuth Subnitrate	75 Gm.	2¼ troy ounces.

Mix them intimately by trituration.

PULVIS ANTISEPTICUS.

(Pulvis Antisepticus Solubilis.)

Soluble Antiseptic Powder.

	Metric.	*Apothecaries'.*
Salicylic Acid	5 Gm.	75 grains.
Carbolic Acid (Phenol U. S. P.)	1 Gm.	15 grains.
Eucalyptol (U. S. P.)	1 Gm.	15 grains.
Menthol (U. S. P.)	1 Gm.	15 grains.
Thymol (U. S. P.)	1 Gm.	15 grains.
Zinc Sulphate	125 Gm.	4 troy ounces.
Boric Acid, in impalpable powder	866 Gm.	27¾ troy ounces.

Triturate the Salicylic Acid and Zinc Sulphate to a very fine powder; add the Carbolic Acid, Eucalyptol, Menthol and Thymol, and continue the trituration, adding the Boric Acid, in small portions at a time, until a uniform impalpable powder is obtained.

PULVIS CATECHU COMPOSITUS.

Compound Powder of Catechu.

Catechu (Gambir, U. S. P.), in fine powder	40 parts.
Kino, in fine powder	20 parts.
Krameria, in fine powder	20 parts.
Cinnamon, in fine powder	10 parts.
Nutmeg, in fine powder	10 parts.

Mix them intimately, pass the powder through a fine sieve, and afterwards rub it lightly in a mortar. Keep it in a stoppered bottle.

Average dose: 1.30 Gm. (20 grains).

Note.—This preparation is official in the B. P.

PULVIS CRETÆ AROMATICUS.

Aromatic Powder of Chalk.

Cinnamon	8 parts.
Saffron	6 parts.
Nutmeg	6 parts.
Cloves	3 parts.
Cardamom	2 parts.
Prepared Chalk	23 parts.
Sugar	52 parts.

Mix the ingredients and reduce them to a fine powder. Pass this through a fine sieve, and afterwards rub it lightly in a mortar. Keep it in a stoppered bottle.

Average dose: 2 Gm. (30 grains).

Note.—This preparation is equivalent to the *Pulvis Cretæ Aromaticus* of the B. P. This authority adds the following note: "If a product of bright color be

desired, the saffron may previously be moistened and triturated with a little water or alcohol, or the fresh and faintly damp mixture may be subjected to considerable pressure in the triturating process."

PULVIS CRETÆ AROMATICUS CUM OPIO.

Aromatic Powder of Chalk with Opium.

Aromatic Powder of Chalk (N. F.)	97.5 parts.
Powdered Opium	2.5 parts.

Mix them intimately.

2 6 Gm. (40 grains) of this preparation contain 0.065 Gm. (1 grain) of Powdered Opium.

Average dose: 1 Gm. (15 grains).

Note.—This preparation is official in the B. P.

PULVIS FERRI ET QUININÆ CITRATIS EFFERVESCENS.

Effervescent Powder of Citrate of Iron and Quinine.

Effervescent Citrate of Iron and Quinine.

Soluble Citrate of Iron and Quinine (U. S. P.)	10 parts
Saccharated Sodium Bicarbonate (N. F.)	495 parts
Saccharated Tartaric Acid (N. F.)	495 parts.

Mix the ingredients, previously well dried, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Citrate of Iron and Quinine,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 247 parts, for an equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under General Formula B (see p. 131).

6 Gm. (90 grains, or about a heaped teaspoonful) of this preparation represent about 0.065 Gm. (1 grain) of Soluble Citrate of Iron and Quinine.

Average dose: 6 Gm. (90 grains).

PULVIS FERRI PHOSPHATIS EFFERVESCENS.

Effervescent Powder of Ferric Phosphate.

Effervescent Phosphate of Iron.

Soluble Ferric Phosphate of Iron (U. S. P.), in a very fine powder	24 parts.
Saccharated Sodium Bicarbonate (N. F.)	488 parts.
Saccharated Tartaric Acid (N. F.)	488 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Phosphate of Iron,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 244 parts, for an equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under General Formula B (see p. 131).

6 Gm. (90 grains, or about a heaped teaspoonful) of this preparation represent about 0.13 Gm. (2 grains) of Soluble Ferric Phosphate.

Average dose: 6 Gm. (90 grains).

PULVIS HYDRARGYRI CHLORIDI MITIS ET JALAPÆ.

Powder of Mild Chloride of Mercury and Jalap.

Calomel and Jalap.

Mild Chloride of Mercury	34 parts.
Jalap, in fine powder	66 parts.

Mix them intimately.

Average dose: 0.65 Gm. (10 grains).

Note.—When "Calomel and Jalap" is prescribed for an adult, without any specification of quantities, it is recommended that about 30 grains be dispensed as one dose.

PULVIS IODOFORMI COMPOSITUS.

Compound Powder of Iodoform.

"Naphthalin Iodoform."

Iodoform, in very fine powder	20 parts.
Boric Acid, in very fine powder	30 parts.
Naphthalene, in very fine powder	50 parts.
Oil of Bergamot	2.5 parts.

Triturate the Boric Acid with the Oil of Bergamot, then mix it with the Iodoform and Naphthalene, and triturate until a homogeneous powder is produced.

Note.—This powder is used in many cases, where a *diluted* preparation of Iodoform, for external purposes, is desired. The odor of the Iodoform is masked both by the Oil of Bergamot, and by the Naphthalene.

PULVIS KINO COMPOSITUS.

Compound Powder of Kino.

Kino, in fine powder	75 parts.
Powdered Opium	5 parts.
Cinnamon, in fine powder	20 parts.

Mix them intimately, pass the mixed powder through a moderately fine sieve, and afterwards rub it lightly in a mortar. Keep it in a stoppered bottle.

1.3 Gm. (20 grains) of this preparation contain 0.065 Gm. (1 grain) of Powdered Opium.

Average dose: 1 Gm. (15 grains).

Note.—This preparation is official in the B. P.

PULVIS MYRICÆ COMPOSITUS.

Compound Powder of Bayberry.

Composition Powder.

Bayberry, bark of the root	60 parts.
Ginger	30 parts.
Capsicum	5 parts.
Cloves	5 parts.

Reduce the substances to a moderately fine powder.

Average dose: 1 Gm. (15 grains).

Note.—Bayberry root bark is derived from *Myrica cerifera* Linné (Wax myrtle; Candleberry).

PULVIS PANCREATICUS COMPOSITUS.

Compound Pancreatic Powder.

Peptonizing Powder.

Pancreatin (U. S. P.)	20 parts.
Sodium Bicarbonate	80 parts.

Mix them by trituration.

Note.—1.5 Gm. (25 *grains*) of this powder are sufficient to peptonize 500 Cc. (1 pint) of fresh cow's milk, by proceeding in the following manner:

Add the Compound Pancreatic Powder to 125 Cc. (4 fluidounces) of tepid Water, contained in a suitable flask, and afterwards add 500 Cc. (1 pint) of fresh cow's Milk, previously heated to 38° C. (100.4° F.). Maintain the mixture at this temperature during thirty minutes, then transfer the flask to a cold place.

Milk thus peptonized should not be used when it has been kept over twenty-four hours, or when it has developed a bitter taste.

A formula for a diluted Peptonizing Powder, intended for the convenient preparation of Humanized Milk (N. F.), is given under the title of "*Pulvis pro Lacte Humanisato*" (see p. 138).

PULVIS PEPSINI COMPOSITUS.

Compound Powder of Pepsin.

Pulvis Digestivus.

	Metric	*Apothecaries'*.
Saccharated Pepsin (N. F. Appendix)	15 Gm.	225 grains.
Pancreatin (U. S. P.)	15 Gm.	225 grains.
Diastase	1 Gm.	15 grains.
Lactic Acid (U. S. P.)	1 Cc.	15 minims.
Hydrochloric Acid (U. S. P.)	2 Cc.	30 minims.
Sugar of Milk	66 Gm.	2 troy ounces.

Add the Acids gradually to the Sugar of Milk, and triturate until they are thoroughly mixed. Mix the Pepsin, Pancreatin and Diastase, and then incorporate this mixture, by trituration, with the Sugar of Milk. Finally, rub the mixture through a hair-sieve, and preserve the powder in bottles.

Average dose: 1 Gm. (15 grains).

Note.—The best commercial variety of Diastase, capable of converting the largest comparative amount of starch into dextrin and glucose, should be used for this purpose.

PULVIS POTASSII BROMIDI EFFERVESCENS.

Effervescent Powder of Potassium Bromide.

Effervescent Potassium Bromide.

Potassium Bromide, in very fine powder	110 parts.
Saccharated Sodium Bicarbonate (N. F.)	445 parts.
Saccharated Tartaric Acid (N. F.)	445 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Potassium Bromide,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 222 parts, for an equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under General Formula B (see p. 131).

6 Gm. (90 grains, or about a heaped teaspoonful) of this preparation represent about 0.65 Gm. (10 grains) of Potassium Bromide.

Average dose: 6 Gm. (90 grains).

PULVIS POTASSII BROMIDI EFFERVESCENS CUM CAFFEINA.

Effervescent Powder of Potassium Bromide with Caffeine.

Effervescent Potassium Bromide with Caffeine.

Potassium Bromide, in very fine powder	110 parts.
Caffeine, in very fine powder	11 parts.
Saccharated Sodium Bicarbonate (N. F.)	440 parts.
Saccharated Tartaric Acid (N. F.)	440 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Potassium Bromide with Caffeine,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 220 parts, for an

equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under General Formula B (see p. 131).

6 Gm. (90 grains, or about a heaped teaspoonful) of this preparation represent about 0.65 Gm. (10 grains) of Potassium Bromide and 0 065 Gm. (1 grain) of Caffeine.

Average dose: 6 Gm. (90 grains).

PULVIS PRO LACTE HUMANISATO.

Humanizing Milk Powder.

"Milk Powder."

Compound Pancreatic Powder (N. F.)	35 parts.
Sugar of Milk	965 parts.

Mix.

Note.—This preparation is intended for convenient use in preparing Humanized Milk (N. F., see p. 74). An even teaspoonful approximates to about 6.5 Gm. (or 100 grains).

PULVIS RHEI ET MAGNESIÆ ANISATUS.

Anisated Powder of Rhubarb and Magnesia.

Compound Anise Powder.

	Metric.	*Apothecaries'.*
Rhubarb, in fine powder	35 Gm.	1 troy ounce.
Heavy Magnesia, calcined	65 Gm.	2 troy ounces.
Oil of Anise	8 Cc.	120 minims.
Alcohol	10 Cc.	150 minims.

Mix the powders, add the Oil of Anise previously dissolved in the Alcohol, and triturate until a uniform mixture results.

Average dose: Infants, 0.3 Gm. (5 grains).

PULVIS SALIS CAROLINI FACTITII EFFERVESCENS.

Effervescent Powder of Artificial Carlsbad Salt.

Effervescent Artificial Carlsbad Salt.

Artificial Carlsbad Salt (N. F.), in form of dry powder	180 parts.
Saccharated Sodium Bicarbonate (N. F.)	410 parts.
Saccharated Tartaric Acid (N. F.)	410 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Artificial Carlsbad Salt,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 205 parts, for an

equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under the General Formula B (see p. 131).

A solution of about 6 Gm. (90 grains) of this preparation, in 200 Cc. (or 6 fluidounces) of Water, represents an equal volume of Carlsbad Water (Sprudel), in its essential constituents.

Average dose: 6 Gm. (90 grains).

PULVIS SALIS KISSINGENSIS FACTITII EFFERVESCENS.

Effervescent Powder of Artificial Kissingen Salt.

Effervescent Artificial Kissingen Salt.

Artificial Kissingen Salt (N. F.)	280 parts.
Saccharated Sodium Bicarbonate (N. F.)	360 parts.
Saccharated Tartaric Acid (N. F.)	360 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Artificial Kissingen Salt,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 180 parts, for an equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under the General Formula B (see p. 131).

A solution of about 5.5 Gm. (80 grains) of this preparation in 200 Cc (or 6 fluidounces) of Water, represents an equal volume of Kissingen Water (Rackoczi Spring), in its essential constituents.

Average dose: 5.5 Gm. (80 grains).

PULVIS SALIS VICHYANI FACTITII EFFERVESCENS.

Effervescent Powder of Artificial Vichy Salt.

Effervescent Artificial Vichy Salt.

Artificial Vichy Salt (N. F.)	240 parts.
Saccharated Sodium Bicarbonate (N. F.)	380 parts.
Saccharated Tartaric Acid (N. F.)	380 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Artificial Vichy Salt,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 190 parts, for an equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under the General FormulaB (see p. 131).

A solution of about 3.75 Gm. (57 grains) of this preparation, in 200 Cc. (or 6 fluidounces) of Water, represents an equal volume of Vichy Water (Grande Grille Spring), in its essential constituents.

Average dose: 3.75 Gm. (57 grains).

PULVIS SALIS VICHYANI FACTITII EFFERVESCENS CUM LITHIO.

Effervescent Powder of Artificial Vichy Salt with Lithium.

Effervescent Artificial Vichy Salt with Lithium.

Artificial Vichy Salt (N. F.)	156 parts.
Lithium Citrate, in very fine powder	56 parts.
Saccharated Sodium Bicarbonate (N. F.)	394 parts.
Saccharated Tartaric Acid (N. F.)	394 parts.

Mix the ingredients, *previously well dried*, and triturate them until a uniform powder is obtained.

To make

Granular Effervescent Artificial Vichy Salt with Lithium,

Substitute Saccharated Citric Acid (N. F.), *not dried*, 192 parts, for an equal weight of the Saccharated Tartaric Acid, and prepare the granulated compound as directed under the General Formula B (see p. 131).

6 Gm. (90 grains, or about a heaped teaspoonful) of this preparation represent nearly 1 Gm. (or about 14 grains) of Artificial Vichy Salt and 0.3 Gm. (5 grains) of Lithium Citrate.

Average dose: 6 Gm. (90 grains).

PULVIS TALCI SALICYLICUS.

Salicylated Powder of Talcum.

Salicylic Acid	30 parts.
Boric Acid, in fine powder	100 parts.
Talc, in fine powder	870 parts.

Mix them intimately.

Note.—The corresponding preparation of the G. P. has the title *Pulvis Salicylicus cum Talco*, and contains 100 parts of Wheat Starch in place of Boric Acid.

SAL CAROLINUM FACTITIUM.

Artificial Carlsbad Salt.

I. In a dry, amorphous form (G. P.).

Potassium Sulphate	2 parts.
Sodium Chloride	18 parts.
Sodium Bicarbonate	36 parts.
Sodium Sulphate, dried	44 parts.

Triturate the ingredients, previously well dried, to a fine, uniform powder.

Note.—The dried Sodium Sulphate is prepared by slowly drying the crystalline salt until it has lost one-half of its weight.

II. In a crystalline form.

Potassium Sulphate	2 parts.
Sodium Chloride	18 parts.
Sodium Carbonate, in clear crystals	61 parts.
Sodium Sulphate, crystallized	88 parts.
Distilled Water	50 parts.

Dissolve the Potassium Sulphate and Sodium Chloride in the Distilled Water, and add this solution to the other two salts, previously melted in a tared capsule and at a gentle heat in their own water of crystallization. Evaporate the mixture to about 180 parts, set it aside in a cool place, and stir frequently, so as to prevent the formation of large crystals, taking care, however, that none of the salt separates in a pulverulent form. Distribute any remaining water of crystallization uniformly over the crystals, and dry the whole mixture sufficiently by exposure to air, so that it will retain its crystalline character.

A solution of about 1 Gm. (16 grains) of the dry, or about 1 75 Gm. (27 grains) of the crystalline salt, in 200 Cc. (or 6 fluidounces) of Water, represents an equal volume of Carlsbad Water (Sprudel) in its essential constituents.

Note.—The salts employed in the preparation of the crystalline form must have been purified by recrystallization.

SAL KISSINGENSE FACTITIUM.

Artificial Kissingen Salt.

Potassium Chloride	17 parts.
Sodium Chloride	357 parts.
Magnesium Sulphate, anhydrous	59 parts.
Sodium Bicarbonate	107 parts.

Triturate the ingredients, previously well dried, to a fine, uniform powder.

A solution of about 1.5 Gm. (24 grains) of this preparation, in 200 Cc. (6 fluidounces) of Water, represents an equal volume of Kissingen Water (Rakoczi Spring), in its essential constituents.

SAL VICHYANUM FACTITIUM.

Artificial Vichy Salt.

Sodium Bicarbonate	846 parts.
Potassium Carbonate	38.5 parts.
Magnesium Sulphate, anhydrous	38.5 parts.
Sodium Chloride	77 parts.

Triturate the ingredients, previously well dried, to a fine, uniform powder.

A solution of about 1 Gm. (14 grains) of this preparation, in 200 Cc. (or 6 fluidounces) of Water, represents an equal volume of Vichy Water (Grande Grille Spring), in its essential constituents.

SODA CUM CALCE.

Soda with Lime.

London Paste.

Sodium Hydroxide,
Lime, each equal parts.

Reduce them to powder in a clean iron mortar, previously warmed, and mix them intimately. Keep the powder in small, well-stoppered vials.

SODII BORO-BENZOAS.

Sodium Boro-Benzoate.

Sodium Borate, in fine powder	3 parts.
Sodium Benzoate	4 parts.

Mix them intimately.

Average dose: 2 Gm. (30 grains).

SODII BICARBONAS SACCHARATUS.

Saccharated Sodium Bicarbonate.

Sodium Bicarbonate (U. S. P.), in very fine powder	3 parts.
Sugar, in very fine powder	1 part.

Triturate the powders together until intimately mixed, and preserve the product in well-stoppered bottles.

Note.—This Saccharate, when dissolved in water with an equal weight of Saccharated Citric Acid (N. F.), or of Saccharated Tartaric Acid (N. F.), will form a neutral solution, and it is introduced into the Formulary for the convenient preparation of Effervescent Powders (N. F., p. 129).

This Saccharate contains 75% of Sodium Bicarbonate.

SPECIES EMOLLIENTES.

Emollient Species.

Emollient Cataplasm. (G. P.)

Althæa Leaves,
Mallow Leaves.
Melilot Tops,
Matricaria,
Flaxseed, of each, equal parts.

Reduce them to a coarse powder, and mix it uniformly

Note.—Mallow Leaves are derived from *Malva vulgaris* Fries and *Malva sylvestris* Linné. Melilot Tops are the leaves and flowering branches of *Melilotus officinalis* Desrousseaux, and *Melilotus altissimus* Thuilliers.

SPECIES LAXANTES.

Laxative Species.

St. Germain Tea. (G. P.)

Senna, cut	16 parts.
Elder Flowers	10 parts.
Fennel, bruised	5 parts.
Anise, bruised	5 parts.
Potassium Bitartrate, in fine powder	4 parts.

Moisten the Senna with a small quantity of water; then sprinkle over it, as uniformly as possible, the Potassium Bitartrate. When it has become dry, mix it lightly and uniformly with the other ingredients.

SPECIES PECTORALES.

Pectoral Species.

Species ad Infusum Pectorale. Breast Tea. (G. P.)

Althæa, peeled	8 parts.
Coltsfoot Leaves	4 parts.
Glycyrrhiza, Russian, peeled	3 parts.
Anise	2 parts.
Mullein Flowers	2 parts.
Orris Root	1 part.

Cut, bruise and mix them.

Note.—Coltsfoot Leaves are derived from *Tussilago Farfara* Linné. Mullein Flowers are from *Verbascum Thapsus* G. Meyer.

Infusum pectorale (Pectoral Infusion, or Infusion of Pectoral Species) is made by infusing 32 Gm. (or 1 troy ounce) of the above preparation, in the usual manner, so as to obtain 300 Cc. (or 10 fluidounces) of strained product.

SPIRITUS ACIDI FORMICI.

Spirit of Formic Acid.

Spiritus Formicarum (G. P.). **Spirit of Ants.**

	Metric.	*Apothecaries'.*
Formic Acid	35 Cc.	1 fluidounce.
Distilled Water	225 Cc.	7 fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Formic Acid with the Distilled Water, and add enough Alcohol to make 1000 Cc. (or 32 fluidounces).

Note.—Formic Acid is required by the G. P. to have a specific gravity of 1.060 to 1.063.

SPIRITUS AROMATICUS.

Aromatic Spirit.

	Metric.	*Apothecaries'.*
Compound Spirit of Orange (U. S. P.)	65 Cc.	2 fluidounces.
Alcohol	935 Cc.	30 fluidounces.

Mix them. Preserve the product, if it is to be kept in stock, in completely filled and well-stoppered vials or bottles, and stored in a cool and dark place.

Aromatic Spirit may also be prepared in the following manner:

	Metric.	*Apothecaries'.*
Sweet Orange Peel, fresh, and deprived of the white, inner portion	675 Gm.	20½ troy ounces.
Lemon Peel, fresh	85 Gm.	2½ troy ounces.
Coriander, bruised	85 Gm.	2½ troy ounces.
Oil of Staranise	1.5 Cc.	23 minims.
Alcohol, a sufficient quantity		
To make	5000 Cc.	160 fluidounces.

Macerate the solids during four days with 4500 Cc. (or 144 fluidounces) of Deodorized Alcohol; then add the Oil of Staranise, filter, and pass enough Deodorized Alcohol through the filter to make the product measure 5000 Cc. (or 160 fluidounces).

Note.—When good, fresh essential oils cannot be readily obtained for preparing the Compound Spirit of Orange, the second formula may be used. But the product obtained by it should not be employed in mixtures containing *iron*, as the latter would cause a darkening of the mixture.

SPIRITUS CARDAMOMI COMPOSITUS.

Compound Spirit of Cardamom.

	Metric.	*Apothecaries'.*
Oil of Cardamom	2 Cc.	30 minims.
Oil of Caraway	0.75 Cc.	11 minims.
Oil of Cinnamon, Cassia	0.50 Cc.	7 minims.
Alcohol	500 Cc.	16 fluidounces.
Glycerin	65 Cc.	2 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Oils in the Alcohol, add the Glycerin, and lastly enough Water to make 1000 Cc. (or 32 fluidounces).

Note.—This preparation is intended as a flavoring ingredient, being equivalent to the official *Tinctura Cardamomi Composita*, without the coloring matter.

SPIRITUS CURASSAO.

Spirit of Curaçao.

	Metric.	*Apothecaries'.*
Oil of Curaçao Orange	165 Cc.	5¼ fluidounces.
Oil of Fennel	3 Cc.	45 minims.
Oil of Bitter Almond	0.75 Cc.	11 minims.
Deodorized Alcohol	832 Cc.	26½ fluidounces.

Mix the Oils with the Deodorized Alcohol, and keep the Spirit in completely filled and well-corked bottles, and stored in a cool and dark place.

Note.—The essential oils used in this case must be as fresh as possible, and *absolutely free* from any terebinthinate odor or taste. Oil of Curaçao Orange may be obtained without difficulty in the market, but it should be carefully examined as to its quality, immediately upon receipt, and should not be kept in stock for any length of time, without special precautions. A still finer quality of Oil of Orange is that derived from Citrus nobilis, which is known in the market as Oil of Mandarin.

SPIRITUS OLEI VOLATILIS.

Spirit of a Volatile Oil.

Any Spirit or alcoholic Solution of a Volatile Oil, for which no formula is given by the U. S. P. or by this Formulary, should be prepared in accordance with the following general formula:

	Metric.	*Apothecaries'.*
Any Volatile Oil	65 Cc.	2 fluidounces.
Deodorized Alcohol	935 Cc.	30 fluidounces.

Dissolve the Volatile Oil in the Deodorized Alcohol.

Note.—The strength of the Spirit thus prepared is approximately 5 per cent. by weight, provided the specific gravity of the Oil is in the neighborhood of 0.900.

SPIRITUS OPHTHALMICUS.

Ophthalmic Spirit.

Alcoholic Eye-Wash.

	Metric.	*Apothecaries'.*
Oil of Lavender	2 Cc.	30 minims.
Oil of Rosemary	6 Cc.	90 minims.
Alcohol	92 Cc.	22 fluidrachms.

Mix them by agitation, and, if necessary, filter the liquid through paper.

SPIRITUS PHOSPHORI.

Spirit of Phosphorus.

Tincture of Phosphorus.

	Metric.	*Apothecaries'.*
Phosphorus	1.2 Gm.	20½ grains.
Absolute Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Weigh the Phosphorus in a tared capsule containing water, then dry it carefully and quickly with blotting-paper, and introduce it into a flask containing 1000 Cc. (or 32 fluidounces) of Absolute Alcohol. Into the neck of the flask insert a perforated cork stopper bearing a long (about 50 Cm. or 2 feet) glass tube, to serve as an air condenser. Place the flask into a water-bath, and heat so that the Alcohol may be kept gently boiling, until the Phosphorus is dissolved. Then allow the liquid to cool, and add, if necessary, sufficient Absolute Alcohol, to restore the measure to 1000 Cc. (or 32 fluidounces).

Preserve the Spirit of Phosphorus, in small, dark amber-colored vials, securely stoppered and in a cool and dark place.

Average dose: 0.5 Cc. (8 minims).

SPIRITUS SAPONATUS.

Spirit of Soap.

	Metric.	*Apothecaries'.*
Castile Soap, in shavings	175 Gm.	5½ troy ounces.
Alcohol	600 Cc.	19 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Introduce the Soap into a bottle, add the Alcohol and 200 Cc. (or 6 fluidounces) of Water, cork the bottle, and immerse it in hot water,

frequently shaking. When the Soap is dissolved, allow the bottle and contents to become cold, then add enough Water to make 1000 Cc. (or 32 fluidounces), and filter.

Note.—The *Spiritus Saponatus* of the G. P. is prepared by saponifying Olive Oil with Potassium Hydroxide, and then adding Alcohol and Water.

If time permits, the Spirit ought to be set aside, in a moderately cold place, for about twelve hours, before it is filtered.

SPIRITUS SINAPIS.

Spirit of Mustard.

	Metric.	*Apothecaries'.*
Volatile Oil of Mustard	2 Gm.	30 grains.
Alcohol	100 Gm.	3 troy ounces.

Mix them.

Note.—This preparation is official in the G. P.

SPONGIA COMPRESSA.

Compressed Sponge.

Sponge Tent.

Sponge, a sufficient quantity.

Mucilage of Acacia (U. S. P.)	1 volume.
Water	9 volumes.

Mix a sufficient quantity of Mucilage of Acacia and of Water, in the proportion of *one* (1) *volume* of the former to *nine* (9) *volumes* of the latter, and immerse in the liquid, the Sponge previously freed from sand and other obvious impurities, and cut into suitable pieces. When the Sponge has been thoroughly impregnated, firmly wrap twine around it so as to bring it to the desired shape, and then dry it.

Note.—Sponge thus prepared is best preserved with the twine wrapped around it. If the twine is removed, special care must be taken to protect the Sponge against damp air.

SPONGIA DECOLORATA.

Decolorized Sponge.

Bleached Sponge.

Sponge,
Potassium Permanganate,
Sodium Thiosulphate,
Hydrochloric Acid,
Water, each, a sufficient quantity.

Free the Sponge from sand and any other obvious impurities or

damaged portions by beating, washing and trimming, then soak it for about fifteen minutes in a sufficient quantity of Solution of Potassium Permanganate, containing 15 Gm. to the liter (240 grains to the quart), wringing the Sponge out occasionally and replacing it in the liquid. Then remove it and wash it with Water, until the latter runs off colorless. Wring out the Water, and then place the Sponge into a Solution of Sodium Thiosulphate, containing 60 Gm. to the liter (2 troy ounces to the quart). Next add for every liter or quart of the last named solution used, 60 Cc. (or 2 fluidounces) of Hydrochloric Acid diluted with 250 Cc. (or 8 fluidounces) of Water. Macerate the Sponge in the liquid for about fifteen minutes, expressing it frequently and replacing it in the liquid. Then remove and express it, immerse it for a short time in a 10 per cent. solution of Sodium Carbonate and again express it. Finally, wash it thoroughly with Water, and dry it. In the case of large and dark-colored sponges, this treatment may be repeated until the color has been removed as far as possible.

Note.—If it is desired to keep the Sponge soft, and to prevent it from shrinking when dry, it may be dipped, after having been finally washed, into a mixture of 1 volume of Glycerin and 5 volumes of Water, after which it is to be wrung out and allowed to dry.

SUCCUS LIMETTÆ CUM PEPSINO.

Lime Juice and Pepsin.

	Metric.	*Apothecaries'.*
Glycerite of Pepsin (N. F.)	400 Cc.	12½ fluidounces.
Lime Juice	600 Cc.	19½ fluidounces.

Mix, and filter if necessary.

4 Cc. (1 fluidrachm) represent about 0.13 Gm. (2 grs.) of Pepsin (U. S. P.).

Average dose: 8 Cc. (2 fluidrachms).

SUPPOSITORIA BOROGLYCERINI.

Suppositories of Boroglycerin.

	Metric.	*Apothecaries'.*
Glycerinated Gelatin (U. S. P.)	15 Gm.	230 grains.
Boric Acid	4 Gm.	60 grains.
Glycerin	17.5 Gm.	270 grains.
Water	13.5 Gm.	210 grains.
To make Rectal Suppositories	12	12

Triturate the Boric Acid with the Glycerin and Water, and add the mixture to the Glycerinated Gelatin, melted and heated on the water-

bath. Continue the heat until the Boric Acid is dissolved, replacing the Water if any be lost by evaporation, and pour the mixture into suitable molds, to make 12 suppositories.

STILI DILUBILES.

Paste Pencils.

"Unna Pencils."

Pencils for the direct application of medicinal agents to the skin, suggested by Dr. Unna, and used in modern dermatologic practice. The medicinal agent is incorporated with a paste consisting of Starch, Dextrin, Tragacanth and Sugar, with sufficient Water to form a plastic mass. This is rolled into cylinders, of about 5 Mm. ($\frac{1}{5}$ inch diameter, which are cut into sections, 5 Cm. (2 inches) long, dried on parchment paper at the room temperature, and wrapped in tin-foil. The following formulas may serve as examples:

1. Stilus Acidi Salicylici Dilubilis, 10 per cent.—Salicylic Acid Pencil (10 %).

Salicylic Acid, in fine powder	10 parts.
Tragacanth, in fine powder	5 parts.
Starch, in fine powder	30 parts.
Dextrin, in fine powder	35 parts.
Sugar, in fine powder	20 parts.

Distilled Water, a sufficient quantity to make a firm plastic mass.

100 Gm. (or 3 troy ounces) of this material make from 40 to 45 pencils.

2. Stilus Cocainæ Dilubilis, 5 per cent.—Cocaine Pencil (5%).

Cocaine Hydrochloride	5 parts.
Tragacanth, in fine powder	5 parts.
Starch, in fine powder	35 parts.
Dextrin, in fine powder	35 parts.
Sugar, in fine powder	20 parts.

Distilled Water, a sufficient quantity to make a firm plastic mass.

100 Gm. (or 3 troy ounces) of this material make from 48 to 50 pencils.

SYRUPI.

Syrups.

The Syrups for which formulas are given in this "Formulary" are, in general, intended to be aqueous solutions of medicinal substances, rendered more palatable and preserved from change by the addition of sugar in proper proportions. With few exceptions, the Syrups are

expected to be absolutely clear, and it is therefore recommended that, whenever practicable. the solution of the sugar in the clear filtrate be effected by the alternative process of "cold solution by percolation," described under "Syrupus" on p. 435 of the U. S. P., VIII (1900).

Some Syrups, particularly those loaded with vegetable extractive matter, though clear when first made, are liable to become turbid on keeping. Such may frequently be clarified by simple filtration through paper, an operation which becomes quite possible by selecting a good quality of filter paper, and this operation may be further facilitated by shaking the syrup before filtration with a small quantity of Purified Talc (U. S. P.)—10 to 15 Gm. (or 3 to 4 drachms) to 1000 Cc. (or 32 fluidounces).

Syrups should be preserved in well-dried bottles, containing the estimated supply for not exceeding 4 to 6 weeks, which should be completely filled, carefully stoppered, and kept in a cool, shady place, at an even temperature.

SYRUPUS ACTÆÆ COMPOSITUS.

Compound Syrup of Actæa.

Compound Syrup of Cimicifuga (or Black Cohosh).

	Metric.	*Apothecaries'.*
Fluidextract of Cimicifuga (U. S. P.)	40 Cc.	10 fluidrachms.
Fluidextract of Glycyrrhiza (U. S. P.)	20 Cc.	5 fluidrachms.
Fluidextract of Senega (U. S. P.)	20 Cc.	5 fluidrachms.
Fluidextract of Ipecac (U. S. P.)	10 Cc.	2½ fluidrachms.
Wild Cherry, in moderately fine powder . . .	40 Gm.	1¼ troy ounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Sugar	650 Gm.	20 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Wild Cherry with 375 Cc. (or 12 fluidounces) of Water, and allow it to macerate during one hour. Then add to it the Fluidextracts and the Talc and stir or agitate the mixture frequently and thoroughly during about fifteen minutes. Transfer it to a wetted filter, and, when the liquid ceases to drop from the funnel, wash the contents of the filter with Water to obtain 500 Cc. (or 16 fluidounces) of filtrate. In this dissolve the Sugar by agitation, and add enough Water, previously passed through the filter to make 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS ASARI COMPOSITUS.

Compound Syrup of Asarum.

Compound Syrup of Canada Snake-Root.

	Metric.	*Apothecaries'.*
Asarum, root, in moderately coarse (No. 40) powder	62 Gm.	1⅞ troy ounces.
Alcohol	200 Cc.	6 fluidounces.
Cochineal, in fine powder	1.5 Gm.	22 grains.
Potassium Carbonate	2.5 Gm.	36 grains.
Wine of Ipecac (U. S. P.)	30 Cc.	440 minims.
Sugar	725 Gm.	22 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Asarum intimately with the Cochineal and Potassium Carbonate, previously triturated together. Moisten the powder with a sufficient quantity of a menstruum prepared by mixing the Alcohol with 375 Cc. (or 12 fluidounces) of Water, and allow it to macerate, in a covered vessel, for twenty-four hours. Then transfer it to a small percolator, and pour on the remainder of the menstruum. Allow the percolation to proceed slowly, and then follow up the menstruum by Water, until 500 Cc. (or 16 fluidounces) of percolate are obtained. To this add the Wine of Ipecac, and afterwards the Sugar, and dissolve the latter by agitation. Finally, add enough Water, previously passed through the percolator, to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.23 Gm. (3½ grains) of Asarum.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS BROMIDORUM.

Syrup of the Bromides.

	Metric.	*Apothecaries'.*
Potassium Bromide	80 Gm.	2½ troy ounces.
Sodium Bromide	80 Gm.	2½ troy ounces.
Ammonium Bromide	50 Gm.	1½ troy ounces.
Calcium Bromide	25 Gm.	360 grains.
Lithium Bromide	8 Gm.	120 grains.
Tincture of Vanilla (U. S. P.)	32 Cc.	1 fluidounce.
Compound Tincture of Cudbear (N. F.)	16 Cc.	½ fluidounce.
Compound Syrup of Sarsaparilla (U. S. P.)	450 Cc.	14½ fluidounces.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Bromides in the Compound Syrup of Sarsaparilla and 400

Cc. (or 10 fluidounces) of Syrup; then add the Tinctures, and sufficient Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 1 Gm. (15 grains) of the mixed Bromides.

Average dose: 4 Cc. (1 fluidrachm.)

SYRUPUS CALCII CHLORHYDROPHOSPHATIS.

Syrup of Calcium Chlorhydrophosphate.

Syrup of Chlorhydrophosphate of Lime.

	Metric.	*Apothecaries'.*
Precipitated Calcium Phosphate	17.5 Gm.	256 grains.
Tincture of Lemon Peel (U. S. P.)	20 Cc.	5 fluidrachms.
Hydrochloric Acid (U. S. P.),		
Water,		
Syrup (U.S.P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Precipitated Calcium Phosphate with 30 Cc. (or 1 fluidounce) of Water, and dissolve it with the aid of Hydrochloric Acid, avoiding an excess. Then add the Tincture of Lemon Peel, filter the liquid, and wash the filter with a mixture of 30 Cc. (or 1 fluidounce), each, of Water and of Syrup. Lastly, add enough Syrup to the filtrate, to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Calcium Phosphate.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS CALCII ET SODII HYPOPHOSPHITUM.

Syrup of Calcium and Sodium Hypophosphites.

Syrup of Hypophosphite of Lime and Soda.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	35 Gm.	512 grains.
Sodium Hypophosphite	35 Gm.	512 grains.
Hypophosphorous Acid (U. S. P.)	1.5 Cc.	23 minims.
Sugar	775 Gm.	22½ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the two Hypophosphites with the Hypophosphorous Acid in 500 Cc. (or 16 fluidounces) of Water, filter the solution, add the Sugar to the filtrate, and pass enough Water through the filter to make the product, after the Sugar has been dissolved by agitation, measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains), each, of Calcium Hypophosphite and Sodium Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS CALCII HYPOPHOSPHITIS.

Syrup of Calcium Hypophosphite.

Syrup of Hypophosphite of Lime.

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	35 Gm.	512 grains.
Hypophosphorous Acid (U. S. P.)	1.5 Cc.	23 minims.
Sugar	775 Gm.	22½ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Calcium Hypophosphite with the Hypophosphorous Acid in 500 Cc. (or 16 fluidounces) of Water, filter the solution, add the Sugar to the filtrate, and pass enough Water through the filter to make the product, after the Sugar has been dissolved by agitation, measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Calcium Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS CALCII IODIDI.

Syrup of Calcium Iodide.

	Metric.	*Apothecaries'.*
Iodine	76 Gm.	1120 grains.
Iron Wire, fine, bright, and finely cut	28 Gm.	400 grains.
Precipitated Calcium Carbonate	34 Gm.	500 grains.
Sugar	700 Gm.	22 troy ounces.
Distilled Water,		
Syrup (U. S. P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Iron Wire with 57 Gm. (or 830 grains) of the Iodine and 175 Cc. (or 5½ fluidounces) of Distilled Water, and apply a gentle heat, until the Iodine is combined, and the liquid has acquired a greenish color. Filter the liquid through a small filter into a flask containing the remainder of the Iodine, wash the filter with about 62 Cc. (or 2 fluidounces) of Distilled Water, and heat the solution gently, taking care that no iodine is lost by evaporation. Heat 235 Cc. (or 7½ fluidounces) of Distilled Water in a capacious capsule to boiling, and add to it alternate portions, first of the Precipitated Calcium Carbonate, and then of the solution of Iodide of Iron, in small portions at a time, stirring briskly and waiting until the violence of the reaction moderates before adding a fresh portion. From time to time, add a little Distilled Water, to replace that lost by evaporation. When all the Iron solution

has been added, continue heating the mixture until it is quietly boiling, then filter it through a wetted filter, and wash the latter with enough Distilled Water to make the product, when cold, measure 500 Cc. (or 16 fluidounces). In this dissolve the Sugar by agitation, then make up the volume with Syrup to 1000 Cc. (or 32 fluidounces), and strain, if necessary.

4 Cc. (1 fluidrachm) contain 0.33 Gm. (5 grains) of Calcium Iodide.

Average dose: 2 Cc. (30 minims).

SYRUPUS CALCII LACTOPHOSPHATIS CUM FERRO.

Syrup of Calcium Lactophosphate with Iron.

Syrup of Lactophosphate of Lime with Iron.

	Metric.	*Apothecaries'.*
Ferrous Lactate	8.5 Gm.	120 grains.
Potassium Citrate	8.5 Gm.	120 grains.
Water	62.5 Cc.	2 fluidounces.
Syrup of Calcium Lactophosphate (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferrous Lactate and Potassium Citrate in the Water with the aid of heat, and add enough Syrup of Calcium Lactophosphate to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.033 Gm. (½ grain) of Ferrous Lactate and about 0.016 Gm. (¼ grain) of Calcium Lactate, or about 0.024 Gm. (⅜ grain) of so-called Calcium Lactophosphate.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS CHONDRI COMPOSITUS.

Compound Syrup of Chondrus.

Compound Syrup of Irish Moss.

	Metric.	*Apothecaries'*
Irish Moss	1 Gm.	16 grains.
Fluidextract of Ipecac (U. S. P.)	1 Cc.	16 minims.
Fluidextract of Squill (U. S. P.)	16 Cc.	½ fluidounce.
Fluidextract of Senega (U. S. P.)	16 Cc.	½ fluidounce.
Camphorated Tincture of Opium (U. S. P.)	28 Cc.	7 fluidrachms.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Sugar	650 Gm.	20 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Macerate the Irish Moss in 62 Cc. (or 2 fluidounces) of Water until it is softened, then heat it on a boiling water-bath for fifteen minutes,

strain it through flannel, without pressure, and wash the flannel and contents with 62 Cc. (or 2 fluidounces) of hot Water. Mix the Fluidextracts and Tincture with the Purified Talc and 325 Cc. (or 10 fluidounces) of Water, shake the mixture frequently and thoroughly during half an hour, and then filter it through a wetted filter, returning the first portions of the filtrate until it runs through clear. Mix the mucilage of Irish Moss with the filtrate, then add the Sugar, and pass enough Water through the filter to make the product, after the Sugar has been dissolved by agitation, measure 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms.)

SYRUPUS CODEINÆ.

Syrup of Codeine.

	Metric.	*Apothecaries'.*
Codeine Sulphate	1 Gm.	14½ grains.
Syrup (U. S. P.)	100 Cc.	3 fluidounces.

Reduce the Codeine Sulphate to a fine powder and dissolve it in the Syrup previously warmed.

4 Cc. (1 fluidrachm) of this preparation contain about 0.032 Gm. (½ grain) of Codeine Sulphate.

Average dose: 2 Cc. (30 minims).

Note.—The *Syrupus Codeini* of the French Pharmacopœia is a weaker preparation, containing only about 0.008 Gm. (⅛ grain) of Codeine (alkaloid) in a fluidrachm.

SYRUPUS CINNAMOMI.

Syrup of Cinnamon.

	Metric.	*Apothecaries'.*
Saigon Cinnamon, in moderately coarse powder	100 Gm.	3 troy ounces.
Alcohol	50 Cc.	1½ fluidounces.
Sugar	800 Gm.	24 troy ounces.
Cinnamon Water (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Alcohol with 450 Cc. (or 13½ fluidounces) of Cinnamon Water, moisten the Cinnamon with a sufficient quantity of this menstruum and allow it to macerate for about two hours. Then transfer it to a small percolator, and percolate, in the usual manner, using first the remainder of the menstruum above directed, and afterwards, Cinnamon Water. Collect the first 500 Cc. (or 16 fluidounces) of the percolate separately, and dissolve in it the Sugar. Then collect an addi-

tional quantity of percolate and add it to the Syrup, so as to make 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation is practically identical with that official in the G. P.

SYRUPUS COFFEÆ.

Syrup of Coffee.

	Metric.	*Apothecaries'.*
Coffee, roasted	250 Gm.	8 troy ounces.
Sugar	800 Gm.	24 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Introduce the Coffee, reduced to a moderately coarse powder, into a suitable vessel; then pour upon it 500 Cc. (or 16 fluidounces) of boiling Water, cover it well, and boil for five minutes. Allow it to become cold, keeping the vessel well covered; strain off the liquid and pass enough Water through the strainer to make the strained liquid, when cold, measure 500 Cc. (or 16 fluidounces). In this dissolve the Sugar, by agitation, without heat, strain through muslin, and pass sufficient Water through the strainer to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

Note.—It is recommended that a mixture of equal parts of the commercial varieties of Coffee, known as "Java" and "Mocha," be employed for this purpose. The coffee may also be exhausted by percolation, but special arrangements are then necessary to maintain the menstruum at the proper temperature.

SYRUPUS ERIODICTYI AROMATICUS.

Aromatic Syrup of Eriodictyon.

Aromatic Syrup of Yerba Santa. Syrupus Corrigens.

	Metric.	*Apothecaries'.*
Fluidextract of Eriodictyon (U. S. P.)	32 Cc.	1 fluidounce.
Solution of Potassium Hydroxide (U. S. P.)	25 Cc.	6 fluidrachms.
Compound Tincture of Cardamom (U. S. P.)	65 Cc.	2 fluidounces.
Oil of Sassafras	0.5 Cc.	8 minims.
Oil of Lemon	0.5 Cc.	8 minims.
Oil of Cloves	1 Cc.	15 minims.
Alcohol	32 Cc.	1 fluidounce.
Sugar	800 Gm.	24 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Fluidextract of Eriodictyon and Solution of Potassium Hy-

droxide, then add 325 Cc. (or 10 fluidounces) of Water previously mixed with the Compound Tincture of Cardamom, and afterwards add the Oils dissolved in the Alcohol. Shake the mixture thoroughly, then filter it, and pour enough Water through the filter to obtain 500 Cc. (or 16 fluidounces) of filtrate. Pour this upon the Sugar contained in a bottle, and dissolve it by placing the bottle in hot water, frequently agitating. Lastly, cool the product and add enough Water, passed through the filter previously used, to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

Note.—This preparation is chiefly intended as a vehicle, for disguising the taste of quinine or of other bitter substances.

SYRUPUS FERRI ARSENATIS.

Syrup of Arsenate of Iron.

	Metric.	*Apothecaries'.*
Sodium Arsenate (U. S. P.), dried to a constant weight at a heat not exceeding 149° C. (300° F.)	0.40 Gm.	6 grains.
Ferric Citrate (U. S. P.)	0.35 Gm.	5 grains.
Water	32 Cc.	1 fluidounce.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Arsenate and Ferric Citrate in the Water, contained in a test-tube, by the aid of heat. Then mix the solution with enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 0.0016 Gm. ($\frac{1}{40}$ grain) of Ferric Arsenate.

Average dose: 0.5 Cc. (8 minims).

Note.—Care should be taken to select perfectly formed crystals of Sodium Arsenate, which must then be dried completely at 100° C. (212° F.), and the quantity required for the above formula must be weighed from the *dried* salt. It is advisable to dry a fresh quantity of the salt each time the above Syrup is to be prepared.

SYRUPUS FERRI CITRO-IODIDI.

Syrup of Citro-Iodide of Iron.

Tasteless Syrup of Iodide of Iron.

	Metric.	*Apothecaries'.*
Iodine	60 Gm.	875 grains.
Iron Wire, fine, bright, and finely cut	28 Gm.	400 grains.
Potassium Citrate	85 Gm.	2½ troy ounces.
Sugar	650 Gm.	20 troy ounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 troy ounces.

Mix the Iron with 250 Cc. (or 8 fluidounces) of Distilled Water in a flask, add 40 Gm. (or 585 grains) of the Iodine, apply a gentle heat and set aside until the Iodine is combined and the solution has acquired a green color. Then heat the contents of the flask to boiling, filter the liquid, and wash the filter with 32 Cc. (or 1 fluidounce) of warm Distilled Water. Add to the filtrate the remaining Iodine and, as soon as solution has been effected, mix it with the Potassium Citrate previously dissolved in 200 Cc. (or 6 fluidounces) of Distilled Water, and agitate the liquid until it has assumed a green color. Pour this upon the Sugar contained in a bottle, agitate until solution has been effected, and when the liquid is cold, add enough Distilled Water to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain an amount of Iron, corresponding to about 0.25 Gm. (4 grains) of Ferric Iodide.

Average dose: 2 Cc. (30 minims).

Note.—The official *Syrupus Ferri Iodidi* contains practically the same amount of iron iodide in a *ferrous* condition.

SYRUPUS FERRI ET MANGANI IODIDI.

Syrup of Iodide of Iron and Manganese.

	Metric.	*Apothecaries'.*
Iodine	81.5 Gm.	1190 grains.
Iron Wire, fine, bright, and finely cut	28 Gm.	400 grains.
Manganese Sulphate	26.5 Gm.	385 grains.
Potassium Iodide	31.5 Gm.	460 grains.
Sugar	800 Gm.	24 troy ounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Iron with 250 Cc. (or 8 fluidounces) of Distilled Water in a flask, add the Iodine, and prepare a solution of ferrous iodide, in the usual manner, aiding the process, if necessary, by heating the contents of the flask, at first gently, and finally to boiling. Filter the liquid, through a small filter, directly upon the Sugar, contained in a suitable bottle. Dissolve the Manganese Sulphate in 125 Cc. (or 4 fluidounces) of Distilled Water, and the Potassium Iodide in 100 Cc (or 3 fluidounces) of Diluted Alcohol, mix the two solutions, and filter into the same bottle which contains the Sugar and the Iron solution. Wash the filter with 32 Cc. (or 1 fluidounce) of cold Distilled Water, receiving the washings in the same bottle. Agitate until the Sugar is dissolved, and, if necessary, strain. Finally, make up the volume with Distilled Water to 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 0.4 Gm. (6 grains) of Ferrous Iodide and 0.150 Gm. (2¼ grains) of Manganese Iodide.

Average dose: 1 Cc. (15 minims).

SYRUPUS FERRI HYPOPHOSPHITIS.

Syrup of Ferric Hypophosphite.

	Metric.	*Apothecaries'.*
Ferric Hypophosphite	17.5 Gm.	256 grains.
Potassium Citrate	25 Gm.	360 grains.
Orange Flower Water	65 Cc.	2 fluidounces.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferric Hypophosphite, with the aid of the Potassium Citrate, in the Orange Flower Water, and add enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Ferric Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS FERRI LACTOPHOSPHATIS.

Syrup of Lactophosphate of Iron.

	Metric.	*Apothecaries'.*
Ferrous Lactate	17.5 Gm.	256 grains.
Phosphoric Acid (85%, U. S. P.), a sufficient quantity		
Water	32 Cc.	1 fluidounce.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferrous Lactate in the Water with the aid of a sufficient quantity of Phosphoric Acid, avoiding an excess, and add enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.065 Gm. (1 grain) of Ferrous Lactate, or about 0.1 Gm. (1½ grains) of so-called Lactophosphate of Iron.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS FERRI PROTOCHLORIDI.

Syrup of Protochloride of Iron.

Syrup of Ferrous Chloride.

	Metric.	*Apothecaries'.*
Solution of Ferrous Chloride (N. F.)	50 Cc.	764 minims.
Glycerin	125 Cc.	4 fluidounces.
Orange Flower Water	125 Cc.	4 fluidounces.
Syrup (U S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Solution of Ferrous Chloride with the Glycerin and Orange

Flower Water, and add enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 0.065 Gm. (1 grain) of Ferrous Chloride.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS FERRI SACCHARATI SOLUBILIS.

Syrup of Soluble Saccharated Iron.

Syrupus Ferri Oxydati Solubilis (G. P.). **Syrup of Saccharated Oxide of Iron. Syrup of Soluble Oxide of Iron.**

	Metric.	*Apothecaries'.*
1. Solution of Ferric Chloride (U. S. P.) . .	102 Gm.	$3\frac{3}{16}$ troy ounces.
Sodium Hydroxide (U. S. P.)	32.5 Gm.	1 troy ounce.
Sugar	300 Gm.	9 troy ounces.
Solution of Sodium Hydroxide (U. S. P.), Distilled Water, Syrup (U. S. P.), of each, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Dissolve the Sodium Hydroxide in 200 Cc. (or 6 fluidounces) of Water; add this solution to the Solution of Ferric Chloride previously mixed with 65 Gm. (or 2 troy ounces) of Syrup, and set the mixture aside, during twenty-four hours, in a dark place. Then pour the clear liquid slowly into 1625 Cc. (or 52 fluidounces) of boiling Distilled Water, continue the boiling for a few minutes, and set the mixture aside during one day, in a dark place, so that it may become clear by settling. Withdraw the supernatant liquid by means of a siphon, then wash the residue again with 1625 Cc. (or 52 fluidounces) of boiling Distilled Water, by decantation. Transfer the magma to a wetted strainer, and wash it with hot Distilled Water, until this runs off colorless, but so that the mass on the strainer still retains a moderately strong alkaline reaction. Then allow the excess of liquid to drain off, transfer the moist magma to a tared porcelain capsule, add the Sugar, and heat it on a water-bath, with exclusion of daylight, during two hours, replacing from time to time any Water lost by evaporation, and adding, if necessary, Solution of Sodium Hydroxide, drop by drop, until the magma is entirely dissolved. Lastly, add enough Syrup to make the product weigh 1000 Gm. (or 32 troy ounces), and transfer the product to bottles, which should be completely filled, and stored in a cool and dark place.

5 Cc. (or about 75 minims) of this Syrup represent approximately 0.065 Gm. (1 grain) of metallic Iron.

Average dose: 4 Cc. (1 fluidrachm).

Note.—The above process is based upon that of the G. P. (1st edition). The formula given by the second edition of this work presupposes the keeping in stock of a dry "Ferrum Oxydatum Saccharatum Solubile" (Saccharated Oxide of Iron), representing 3 per cent. of metallic iron. When this is available, the *Syrup of Soluble Saccharated Iron* may also be prepared by the following formula:

2. Saccharated Oxide of Iron,
Syrup,
Water, each, equal parts.

Dissolve the Saccharated Oxide of Iron in the mixed liquids.

SYRUPUS GLYCYRRHIZÆ.

Syrup of Glycyrrhiza.

Syrup of Licorice.

	Metric.	*Apothecaries'.*
Pure Extract of Glycyrrhiza (U. S. P.) . . .	125 Gm.	4 troy ounces.
Glycerin	125 Gm.	4 troy ounces.
Sugar	650 Gm.	20 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Pure Extract of Glycyrrhiza in 500 Cc. (or 16 fluidounces) of Water, add the Sugar, dissolve it by agitation, and strain. Then add the Glycerin, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 2 Gm. (30 grains) of Licorice Root.

Average dose: 8 Cc. (2 fluidrachms).

SYRUPUS HYDROCHLOROPHOSPHATUM.

Compound Syrup of Phosphates with Quinine and Strychnine.

"Compound Syrup of Hydrochlorophosphates."

	Metric.	*Apothecaries'.*
Potassium Bicarbonate	20 Gm.	290 grains.
Magnesium Carbonate	20 Gm.	290 grains.
Calcium Carbonate	20 Gm.	290 grains.
Soluble Ferric Phosphate (U. S. P.) . . .	17.5 Gm.	256 grains.
Quinine Hydrochloride	4.4 Gm.	64 grains.
Strychnine Sulphate	0.14 Gm.	2 grains.
Phosphoric Acid (U. S. P. = 85%)	70 Cc.	2¼ fluidounces.
Citric Acid	75 Gm.	2½ troy ounces.
Orange Flower Water	125 Cc.	4 fluidounces.
Glycerin	250 Cc.	8 fluidounces.
Sugar	525 Gm.	16 troy ounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the acids with 100 Cc. (or 3 fluidounces) of Distilled Water, in a capacious vessel, and gradually add the Magnesium and Calcium Carbonate and Potassium Bicarbonate. When effervescence has ceased and all is dissolved, make a solution of the Ferric Phosphate, the Quinine Hydrochloride, and the Strychnine Sulphate, in the Orange Flower Water, by the aid of a little heat, and add this to the first solution, followed by the Glycerin and Sugar. Shake the mixture until the Sugar is dissolved, add enough Distilled Water to make 1000 Cc. (or 32 fluidounces), and filter.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS IPECACUANHÆ ET OPII.

Syrup of Ipecac and Opium.

Syrup of Dover's Powder.

	Metric.	*Apothecaries'.*
Tincture of Ipecac and Opium (U. S. P.) . . .	85 Cc.	2½ fluidrachms.
Spirit of Cinnamon (U. S. P.)	4 Cc.	60 minims.
Cinnamon Water (U. S. P.)	32 Cc.	1 fluidounce.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Tincture, the Spirit and the Water; then add enough Syrup, to make 1000 Cc. (or 32 fluidounces), and mix well.

4 Cc. (1 fluidrachm) represent 0.34 Gm. (5 grains) of Dover's Powder, or 0.032 Gm. (½ grain), each, of Ipecac and Opium.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS MANNÆ.

Syrup of Manna.

	Metric.	*Apothecaries'.*
Manna, in flakes	125 Gm.	4 troy ounces.
Sugar	775 Gm.	24½ troy ounces.
Alcohol	65 Cc.	2 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Manna in 425 Cc. (or 13 fluidounces) of hot Water, add the Alcohol, set the liquid aside for twelve hours in a moderately warm place, and filter. Dissolve the Sugar in the filtrate, with the aid of a gentle heat, allow the Syrup to cool, and add enough Water, passed through the filter previously used, to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

Note.—The product is approximately of the same strength as that which is official in the G. P.

SYRUPUS MORPHINÆ COMPOSITUS.

Compound Syrup of Morphine.

	Metric.	*Apothecaries'.*
Fluidextract of Ipecac (U. S. P.)	2 Cc.	30 minims.
Fluidextract of Senega (U. S. P.)	100 Cc.	3 fluidounces.
Fluidextract of Rhubarb (U. S. P.)	16 Cc.	240 minims.
Morphine Sulphate	0.55 Gm.	8 grains.
Oil of Sassafras	1 Cc.	15 minims.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Morphine Sulphate in about 64 Cc. (or 2 fluidounces) of Syrup, then add the Fluidextracts and the Oil of Sassafras, and lastly, enough Syrup to make 1000 Cc. (or 32 fluidounces). Mix the whole thoroughly by shaking.

Average dose : 4 Cc. (1 fluidrachm).

Note.—In some sections of the country, this preparation is dispensed, when Pectoral Syrup or Jackson's Cough Syrup is demanded or ordered. As the formula differs too much from that originally used by Dr. Jackson (see *Syrupus Pectoralis*, p. 164), it is recommended that the above preparation be dispensed only when it is designated by the title above given.

SYRUPUS MORPHINÆ SULPHATIS.

Syrup of Morphine Sulphate.

Syrupus Morphinæ. Syrup of Morphine.

	Metric.	*Apothecaries'.*
1. Morphine Sulphate	2.2 Gm.	32 grains.
Water, hot	32 Cc.	1 fluidounce.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Morphine Sulphate in the hot Water, and add enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.008 Gm. (⅛ grain) of Morphine Sulphate.

Average dose : 2 Cc. (30 minims).

Note.—This preparation is in considerable use in the Southern States. It should, however, never be dispensed in prescriptions, unless it is known to be the preparation intended, or unless it is designated as that of the National Formulary (N. F.).

When *Syrup of Morphine* is prescribed without any such specific designation or knowledge, it is recommended that the corresponding, but weaker preparation of the Codex be dispensed. The official title of this is *Sirop de Chlorhydrate de Morphine* (or *Sirop de Morphine*).

This may be prepared approximately of the strength required by the Codex, as follows:

	Metric.	*Apothecaries'.*
2. Morphine Hydrochloride	0.7 Gm.	10 grains.
Water	32 Cc.	1 fluidounce.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Morphine Hydrochloride in the Water, and add enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 0.0026 Gm. ($\frac{1}{25}$ grain) of Morphine Hydrochloride.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS PAPAVERIS.

Syrup of Poppy.

	Metric.	*Apothecaries'.*
1. Tincture of Poppy (N. F.)	875 Cc.	28 fluidounces.
Sugar	775 Gm.	23½ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Evaporate the Tincture of Poppy, on a water-bath, at a gentle heat, until its volume is reduced to 450 Cc. (or 14½ fluidounces). In this dissolve the Sugar with a gentle heat, strain, and when the Syrup is cold, add enough Water to make 1000 Cc. (or 32 fluidounces).

Average dose: 2 Cc. (30 minims).

Note.—The product is practically identical with the *Syrupus Papaveris* of the B. P. The corresponding preparation of the G. P. (*Syrupus Papaveris*, or *Syrupus Diacodii*) is much weaker, and may be prepared as follows:

	Metric.	*Apothecaries'.*
2. Tincture of Poppy (N. F.)	125 Cc.	4 fluidounces.
Syrup (U. S. P.)	875 Cc.	28 fluidounces.

Mix them.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS PECTORALIS.

Pectoral Syrup.

Jackson's Pectoral (or Cough) Syrup.

	Metric.	*Apothecaries'.*
Morphine Hydrochloride	0.55 Gm.	8 grains.
Oil of Sassafras	0.5 Cc.	8 minims.
Syrup of Acacia (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Morphine Hydrochloride in about 62 Cc. (or 2 fluid-

ounces) of the Syrup, add the Oil of Sassafras, and enough Syrup to make 1000 Cc. (or 32 fluidounces).

4 Cc. 1 fluidrachm) contain 0.002 Gm. ($\frac{1}{32}$ grain) of Morphine Hydrochloride.

Average dose: 4 Cc. (1 fluidrachm).

Note.—The original formula of Dr. Samuel Jackson's Cough Syrup was as follows: Sassafras Pith, 60 grains; Acacia, 1 ounce; Sugar, 28 av. ounces; Muriate of Morphine, 8 grains; Water, enough to make 32 fluidounces. The Sassafras Pith was afterwards uniformly replaced by Oil of Sassafras, and the other constituents of the Syrup have been more or less altered, so that a number of different formulas are in vogue in different sections of the country. It is recommended that the above be followed, if possible, for the sake of uniformity. (See note to *Syrupus Morphinæ Compositus*, p. 163).

SYRUPUS PHOSPHATUM COMPOSITUS.

Compound Syrup of the Phosphates.

"Chemical Food."

	Metric.	*Apothecaries'.*
Precipitated Calcium Carbonate	35 Gm.	512 grains.
Soluble Ferric Phosphate (U. S. P.)	17.5 Gm.	256 grains.
Ammonium Phosphate	17.5 Gm.	256 grains.
Potassium Bicarbonate	4 Gm.	60 grains.
Sodium Bicarbonate	4 Gm.	60 grains.
Citric Acid	82 Gm.	2½ troy ounces.
Glycerin	375 Cc.	12 fluidounces.
Phosphoric Acid (U. S. P., 85%)	70 Gm.	2⅛ troy ounces.
Orange Flower Water	125 Cc.	4 fluidounces.
Tincture of Cudbear (N. F.)	16 Cc.	½ fluidounce.
Sugar	300 Gm.	9 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Precipitated Calcium Carbonate with the Potassium and Sodium Bicarbonates, the Citric Acid, Glycerin, and Orange Flower Water, and gradually add the Phosphoric Acid, stirring until solution has been effected. Dissolve the Ferric Phosphate and the Ammonium Phosphate in 250 Cc. (or 8 fluidounces) of hot Water, cool, and add the solution to that previously prepared. Filter the whole through a pellet of absorbent cotton placed in the neck of a funnel, and receive the filtrate in a graduated bottle containing the Sugar. Agitate until the latter is dissolved, then add the Tincture of Cudbear, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain about 0.13 Gm. (2 grains) of Calcium Phosphate, 0.065 Gm. (1 grain), each of the Phosphates of Iron and of

Ammonium, and smaller quantities of Potassium and Sodium Phosphates

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS PINI STROBI COMPOSITUS.

Compound Syrup of White Pine.

	Metric.	*Apothecaries'.*
White Pine Bark (Pinus Strobus)	85 Gm.	2⅔ troy ounces.
Wild Cherry Bark	85 Gm.	2⅔ troy ounces.
Spikenard Root	10 Gm.	150 grains.
Balm of Gilead Buds	10 Gm.	150 grains.
Sanguinaria Root	8 Gm.	120 grains.
Sassafras Bark	7 Gm.	100 grains.
Morphine Sulphate	0.5 Gm.	8 grains.
Chloroform	6 Cc.	90 minims.
Sugar	750 Gm.	24 troy ounces.
Alcohol, Water, Syrup (U. S. P.), of each a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the vegetable drugs to a moderately coarse (No. 40) powder, moisten the powder with a menstruum composed of 1 volume of Alcohol and 7 volumes of Water, and macerate for 12 hours. Then percolate with the same menstruum until 500 Cc. (or 16 fluidounces) of tincture have been obtained, in which dissolve the Sugar and the Morphine Sulphate; lastly, add the Chloroform, and sufficient Syrup to make 1000 Cc. (or 32 fluidounces), and strain.

SYRUPUS QUINIDINÆ.

Syrup of Quinidine.

Bitterless Syrup of Quinidine.

	Metric.	*Apothecaries'.*
Quinidine (Alkaloid), in crystals	33 Gm.	1 troy ounce.
Mucilage of Acacia (U. S. P.)	64 Cc.	2 fluidounces.
Solution of Saccharin (N. F.)	32 Cc.	1 fluidounce.
Syrup of Orange Flowers (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Quinidine with the Mucilage and Solution of Saccharin, without breaking up the crystals, and add sufficient Syrup of Orange Flowers, to make 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation must be well shaken before dispensing it.

SYRUPUS RHAMNI CATHARTICÆ.

Syrup of Rhamnus Cathartica.

Syrup of Buckthorn Berries. Syrupus Spinæ Cervinæ.

	Metric.	*Apothecaries'.*
Sugar	800 Gm.	24 troy ounces.
Fermented Juice of Buckthorn Berries, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sugar in 500 Cc. (or 16 fluidounces) of the Juice, with the aid of a gentle heat, allow the Syrup to cool, then add enough of the Juice to make 1000 Cc. (or 32 fluidounces), and strain, if necessary.

Average dose: 8 Cc. (2 fluidrachms).

Note.—This preparation is practically identical with that official in the *G. P.* The species of Buckthorn to be used is the *Rhamnus cathartica* Linné, native of Europe, and naturalized, to some extent, in the U. S. If the fresh berries cannot be obtained, the imported fermented juice may be used in preparing the Syrup.

SYRUPUS RHEI ET POTASSII COMPOSITUS.

Compound Syrup of Rhubarb and Potassa.

Neutralizing Cordial.

	Metric.	*Apothecaries'.*
Fluidextract of Rhubarb (U. S. P.)	16 Cc.	4 fluidrachms.
Fluidextract of Hydrastis (U. S. P.)	8 Cc.	2 fluidrachms.
Potassium Carbonate	16 Gm.	½ troy ounce.
Tincture of Cinnamon (U. S. P.)	64 Cc.	2 fluidounces.
Spirit of Peppermint (U. S. P.)	8 Cc.	2 fluidrachms.
Syrup (U. S. P.)	250 Cc.	8 fluidounces.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Potassium Carbonate in the Syrup, and add the solution to the Fluidextracts, Tincture and Spirit, previously mixed with 500 Cc. (or 16 fluidounces) of Diluted Alcohol. Mix well, add enough Diluted Alcohol to make 1000 Cc. (or 32 fluidounces), and filter, if necessary.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS RUBI AROMATICUS.

Aromatic Syrup of Blackberry.

	Metric.	*Apothecaries'.*
Rubus (U. S. P.)	128 Gm.	4 troy ounces.
Cinnamon	16 Gm.	240 grains.
Nutmeg	16 Gm.	240 grains.
Cloves	8 Gm.	120 grains.
Allspice	8 Gm.	120 grains.
Sugar	650 Gm.	20 troy ounces.
Diluted Alcohol (U. S. P.), Blackberry Juice, fresh, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the Rubus (Blackberry Root) and the Aromatics to a moderately coarse (No. 40) powder, and percolate it, in the usual manner, with the Diluted Alcohol, until 250 Cc. (or 8 fluidounces) of percolate are obtained. To this add 450 Cc. (or 14½ fluidounces of Blackberry Juice, and dissolve the Sugar in the liquid by agitation. Lastly, add enough Blackberry Juice to make 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

SYRUPUS SANGUINARIÆ.

Syrup of Sanguinaria.

Syrup of Bloodroot.

	Metric.	*Apothecaries'.*
Sanguinaria, in No. 20 powder	225 Gm.	7 troy ounces.
Acetic Acid (U. S. P.)	125 Cc.	4 fluidounces.
Sugar	800 Gm.	24 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Acetic Acid with 375 Cc. (or 12 fluidounces) of Water, moisten the Sanguinaria with a sufficient quantity of this menstruum, and allow it to macerate for two hours. Then pack it in a glass percolator, and percolate in the usual manner, first with the remainder of the menstruum previously prepared, and afterwards with Water, until 750 Cc. (or 24 fluidounces) of percolate are obtained, or until the Sanguinaria is practically exhausted. Evaporate the percolate, at a moderate heat, to 500 Cc. (or 16 fluidounces). In this dissolve the Sugar with a gentle heat, if necessary, and add enough Water to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.85 Gm. (13 grains) of Sanguinaria.

Average dose: 2 Cc. (30 minims).

SYRUPUS SENNÆ AROMATICUS.

Aromatic Syrup of Senna.

	Metric.	*Apothecaries'.*
Fluidextract of Senna (U. S. P.)	125 Cc.	4 fluidounces.
Jalap	50 Gm.	1½ troy ounces.
Rhubarb	17.5 Gm.	256 grains.
Cinnamon	4 Gm.	60 grains.
Cloves	4 Gm.	60 grains.
Nutmeg	2 Gm.	30 grains.
Oil of Lemon	1.5 Cc.	20 minims.
Sugar	800 Gm.	24 troy ounces.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the drugs to a moderately fine (No. 50) powder, add to it the Oil of Lemon, and percolate it, in the usual manner, with Diluted Alcohol. Remove the first 375 Cc. (or 12 fluidounces) of the percolate, add the Fluidextract of Senna, and dissolve in this the Sugar, with the aid of a gentle heat, if necessary, but avoiding loss of alcohol by evaporation. Allow the solution to cool, collect a further portion of percolate, and add it to the Syrup, so as to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 0.5 Gm. (7½ grains) of deodorized Senna, 0.2 Gm. (3 grains) of Jalap, and 0.065 Gm. (1 grain) of Rhubarb, with aromatics.

Average dose: 8 Cc. (2 fluidrachms).

SYRUPUS SENNÆ COMPOSITUS.

Compound Syrup of Senna.

	Metric.	*Apothecaries'.*
Fluidextract of Senna (U. S. P.)	135 Cc.	4½ fluidounces.
Fluidextract of Rhubarb (U. S. P.)	35 Cc.	512 minims.
Fluidextract of Frangula (U. S. P.)	35 Cc.	512 minims.
Oil of Gaultheria	4 Cc.	60 minims.
Alcohol	65 Cc.	2 fluidounces.
Syrup (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Oil of Gaultheria in the Alcohol, and add this to the mixed Fluidextracts. Then add enough Syrup to make 1000 Cc. (or 32 fluidounces), and mix by agitation.

4 Cc. (1 fluidrachm) represent 0.52 Gm. (8 grains) of Senna, and 0.13 Gm. (2 grains), each, of Rhubarb and Frangula.

Average dose: 8 Cc. (2 fluidrachms).

SYRUPUS SODII HYPOPHOSPHITIS.

Syrup of Sodium Hypophosphite.

	Metric.	*Apothecaries'.*
Sodium Hypophosphite	35 Gm.	512 grains.
Hypophosphorous Acid (U. S. P.)	2 Cc.	30 minims.
Sugar	800 Gm.	24 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Hypophosphite with the Hypophosphorous Acid in 500 Cc. (or 16 fluidounces) of Water, and filter the solution. In this dissolve the Sugar by agitation, and pass enough Water through the filter, to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain 0.13 Gm. (2 grains) of Sodium Hypophosphite.

Average dose: 4 Cc. (1 fluidrachm).

SYRUPUS STILLINGIÆ COMPOSITUS.

Compound Syrup of Stillingia.

	Metric.	*Apothecaries'.*
Compound Fluidextract of Stillingia (N. F.) .	250 Cc.	8 fluidounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Sugar	725 Gm.	22 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Compound Fluidextract of Stillingia with the Purified Talc, and afterwards with 275 Cc. (or 9 fluidounces) of Water, and shake them together thoroughly. Then pour the mixture upon a wetted filter, add the Sugar to the filtrate, and pass enough Water through the filter to make the product, after the Sugar has been dissolved by agitation, measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 1 Cc. (15 minims) of Compound Fluidextract of Stillingia (N. F.).

Average dose: 4 Cc. (1 fluidrachm)

TINCTURÆ.

Tinctures.

Tinctures are alcoholic extractions of vegetable or animal substances representing in each case definite quantities of the substances from which they are prepared, and obtained, when not by direct solution, by macerating or percolating the substance with Alcohol alone, or with mixtures of Alcohol with Water, or Glycerin, or both, in proportions varying according to the nature of the substance to be extracted.

General Process.—All Tinctures for which no working formula is provided by the Pharmacopœia of the United States of America, the National Formulary, or some other work of authority, should be prepared in the following proportions:

	Metric.	*Apothecaries'.*
The Drug, properly comminuted	100 Gm.	3 troy ounces.
The Menstruum, enough to make	1000 Cc.	32 fluidounces.

Menstruum —The choice of menstruum will depend mainly upon the nature of the drug, but to some extent also upon the uses to which the Tincture is to be applied. In general it may be stated that, if the useful constituents are soluble in alcohol, and but slightly or not at all soluble in water, strong alcohol should be used as a menstruum; but whenever it is possible, and consistent with the intended use of the preparation, the alcoholic strength of the menstruum should be made to approach that of Diluted Alcohol, the object being not only to exhaust the Drug of all its useful constituents, but also to retain them in solution.

Method.—If the drug is fibrous and can be dried and powdered without injury or loss of useful constituents, *percolation* is preferable, and this should be carried out in strict accordance with the very explicit directions given under the "Introductory Notices" (pp. I–III) of the U. S. P. VIII (1900). If the drug is resinous, and partly or almost wholly soluble in the menstruum, or if the drug is so fibrous that it cannot well be powdered without undergoing injury, *maceration* should be resorted to. In the latter case, the drug, comminuted as much as possible, should be kept in contact with three-fourths the full quantity of the menstruum, in a moderately warm and shady place—the term "moderately warm" signifying a temperature of 15°–20° C. (59°–68° F.)—for two weeks, with occasional agitation; the liquid portion is then removed by pressure, and the residual marc displaced with sufficient menstruum, either in a funnel containing a cotton filter, or by remaceration and expression, until the full quantity (1000 Cc. or 32

fluidounces) of Tincture is obtained; but in the case of re-maceration, this should be done with several portions of the menstruum.

Alternative Method.—The process of preparing Tinctures by percolation having been devised with the primary object of securing with celerity and economy products of practically uniform and reliable composition, and having replaced the older, and, in other respects, equally efficient, process of maceration, the latter may be resorted to in any case, if economy or time are no object, or if for other reasons it is desirable to resort to maceration, provided this "alternative method" is carried out as follows:

Reduce the drug or drugs to the finest practicable division, and, having weighed out the specified quantity, place it into a stoppered bottle, and add the specified menstruum in quantity *equal to the total volume* of Tincture to be made. Then macerate for at least two weeks, in a moderately warm and shady place. When required for use, decant the clear liquid and filter it through paper; express the residual marc, and, having filtered the expressed liquid through the same filter, mix the clear filtrates.

TINCTURA ACONITI, FLEMING.

Fleming's Tincture of Aconite.

	Metric.	*Apothecaries'.*
1. Aconite (root), in fine powder	700 Gm.	21¼ troy ounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the Aconite with enough Alcohol to render it distinctly damp and to maintain it so after twenty-four hours' maceration in a well covered vessel. Then pack it tightly in a percolator, and percolate it slowly, in the usual manner, with Alcohol, until 1000 Cc. (or 32 fluidounces) of tincture are obtained.

Average dose: 0.06 Cc. (1 minim).

Note.—This preparation is still prescribed by many physicians. It is recommended that their attention be directed to the official Fluidextract and Tincture of Aconite, so that the above preparation may be gradually abandoned.

When this preparation is required for immediate use, and it is not otherwise available, it may be prepared in the following manner:

	Metric.	*Apothecaries'.*
2. Fluidextract of Aconite (U. S. P.)	70 Cc.	17½ fluidrachms.
Alcohol	30 Cc.	7½ fluidrachms.

Mix them.

TINCTURA AMARA.

Bitter Tincture.

Stomachic Tincture. Bitter Stomachic Drops. Stomach Drops.

	Metric.	*Apothecaries'.*
Gentian	50 Gm.	1½ troy ounces.
Centaury, herb	50 Gm.	1½ troy ounces.
Bitter Orange Peel	35 Gm.	512 grains.
Orange Berries	17.5 Gm.	256 grains.
Zedoary, root	17.5 Gm.	256 grains.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the drugs to a moderately coarse (No. 40) powder, and percolate it, in the usual manner, with a mixture of *two* (2) *volumes* of Alcohol and *one* (1) *volume* of Water, until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

Average dose: 2 Cc. (30 minims).

Note.—Centaury is the herb of *Erythræa Centaurium* Persoon. Orange Berries are the unripe fruit of *Citrus vulgaris* Risso, collected while small. Zedoary is the rhizome of *Curcuma Zedoaria* Roscoe. The product obtained by the above formula is practically identical with that which is official in the G. P.

TINCTURA ANTACRIDA.

Antacrid Tincture.

Dysmenorrhœa Mixture. Fenner's Guaiac Mixture.

	Metric.	*Apothecaries'.*
Corrosive Mercuric Chloride	5.5 Gm.	80 grains.
Guaiac (U. S. P.), in fine powder	130 Gm.	4 troy ounces.
Canada Turpentine	130 Gm.	4 troy ounces.
Oil of Sassafras	32 Cc.	1 fluidounce.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Introduce the Guaiac and the Canada Turpentine into a flask, together with 750 Cc. (or 24 fluidounces) of Alcohol, cork the flask loosely, and heat the contents, on a water-bath, slowly to boiling. Then cool the flask, and filter the contents through a small filter. Dissolve the Corrosive Mercuric Chloride in 32 Cc. (or 1 fluidounce) of Alcohol, and add this solution, as well as the Oil of Sassafras, to the

filtrate. Lastly, pass enough Alcohol through the filter to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) contain nearly 0.022 Gm. (⅓ grain) of Corrosive Mercuric Chloride.

Average dose: 1 Cc. (15 minims).

TINCTURA ANTIPERIODICA.

Antiperiodic Tincture.

"Warburg's Tincture."

1. Without Aloes:	*Metric.*	*Apothecaries'.*
Rhubarb	8 Gm.	115 grains.
Angelica Seed	8 Gm.	115 grains.
Elecampane	4 Gm.	58 grains.
Saffron	4 Gm.	58 grains.
Fennel	4 Gm.	58 grains.
Prepared Chalk	4 Gm.	58 grains.
Gentian	2 Gm.	29 grains.
Zedoary	2 Gm.	29 grains.
Cubeb	2 Gm.	29 grains.
Myrrh	2 Gm.	29 grains.
Camphor	2 Gm.	29 grains.
White Agaric	2 Gm.	29 grains.
Opium	0.25 Gm.	4 grains.
Black Pepper	0.35 Gm.	6 grains.
Cinnamon	0.75 Gm.	12 grains.
Ginger	0.75 Gm.	12 grains.
Quinine Sulphate	20 Gm.	290 grains
Alcohol,		
Distilled Water, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix Alcohol and Distilled Water in the proportion of 3 *volumes* of Alcohol and 2 *volumes* of Water. Reduce all the drugs, with the exception of the Quinine Sulphate, to a moderately coarse (No. 30) powder, and digest the powder with 875 Cc. (or 28 fluidounces) of the menstruum, in a glass flask provided with an upright condenser, on a water-bath, at a temperature not higher than 65° C. (150° F.), during twelve hours, carefully avoiding loss of alcohol by vaporization. After cooling, strain the liquid by expression, and wash the residue with sufficient menstruum, again expressing, to make 1000 Cc. of expressed liquid. In this dissolve the Quinine Sulphate, by the aid of gentle heat, if necessary. Then filter the Tincture through paper.

32 Cc. (or 1 fluidounce) of Warburg's Tincture, *without Aloes*, contain 0.60 Gm. (or 9 grains) of Quinine Sulphate.

2. *With Aloes:*	*Metric.*	*Apothecaries'.*
Extract of Aloes (U. S. P.)	17.5 Gm.	256 grains.
Antiperiodic Tincture, without Aloes . . .	1000 Cc.	32 fluidounces.

Dissolve the Extract in the Tincture.

32 Cc. (or 1 fluidounce of Warburg's Tincture, *with Aloes*) contain about 0.5 Gm. (8 grains) of Extract of Aloes, equal to about 1 Gm. (15½ grains) of Aloes.

This preparation (containing Aloes) is to be dispensed when "Warburg's Tincture," without further specification, is ordered.

Dosage.—The dosage of Warburg's Tincture depends on the kind used—whether with Aloes or without—and the intended purpose, and varies from 4 Cc. (1 fluidrachm) to 16 Cc. (4 fluidrachms). The larger quantity is given when Dr. Warburg's original directions are followed for administering the remedy in remittant fevers, which were as follows: "One-half ounce to be given alone without dilution, after the bowels have been evacuated by any convenient purgative, all drink being withheld. After three hours, another half ounce is to be given."

Note—The formula for Warburg's Tincture has been corrected in conformity with the original formula communicated by Dr. Warburg, the quantities being adjusted so as to make 1000 Cc. (or 32 fluidounces).

TINCTURA AROMATICA.

Aromatic Tincture.

	Metric.	*Apothecaries'.*
Cinnamon	85 Gm.	2⅔ troy ounces.
Ginger	36 Gm.	520 grains.
Galangal	18 Gm.	260 grains.
Cloves	18 Gm.	260 grains.
Cardamom	18 Gm.	260 grains.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the drugs to a moderately coarse (No. 40) powder, and percolate it, in the usual manner, with a mixture of *two* (2) *volumes* of Alcohol and *one* (1) *volume* of Water, until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

Average dose: 2 Cc. (30 minims).

Note.—This preparation is practically identical with that which is official in the G. P. Galangal is the root of *Alpinia officinarum* Hance.

TINCTURA CAPSICI ET MYRRHÆ.

Tincture of Capsicum and Myrrh.

Hot Drops.

	Metric.	*Apothecaries'.*
Capsicum, in No. 20 powder	32 Gm.	1 troy ounce.
Myrrh, in moderately coarse powder	125 Gm.	4 troy ounces.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the powders with an equal bulk of clean, fine sand, and percolate them, in the usual manner, with a mixture of *nine* (9) *volumes* of Alcohol, and *one* (1) *volume* of Water, until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

Average dose: 2 Cc. (30 minims).

Note.—This preparation is known in some parts of this country by the old Thompsonian name "Number six."

TINCTURA CINCHONÆ DETANNATA.

Detannated Tincture of Cinchona.

	Metric.	*Apothecaries'.*
Fluidextract of Cinchona (U. S. P.)	185 Cc.	6 fluidounces.
Alcohol	500 Cc.	16 fluidounces.
Solution of Ferric Sulphate (U. S. P.)	375 Cc.	12 fluidounces.
Ammonia Water (U. S. P.)	375 Cc.	12 fluidounces.
Water,		
Diluted Alcohol (U. S. P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

To the Ammonia Water, diluted with 1500 Cc. (or 48 fluidounces) of Water, gradually add the Solution of Ferric Sulphate, previously diluted with 2500 Cc. (or 80 fluidounces) of Water, with constant stirring. Pour this mixture, containing Ferric Hydroxide as a precipitate, upon a wet muslin strainer (which has been weighed, after having been wetted and deprived of the excess of water by moderate pressure), and when the liquid has drained off, return the precipitate to the vessel, and mix it intimately with about 4000 Cc. (or 128 fluidounces) of Water. Again drain it on the strainer, transfer it once more to the vessel, and treat it as before. Finally drain and press the precipitate on the strainer until it weighs 500 Gm. (or 16 troy ounces).

Mix the Fluidextract of Cinchona with 500 Cc. (or 16 fluidounces) of Alcohol, and add the Ferric Hydroxide previously prepared. Agitate the mixture frequently, until the tincture is deprived of tannin, which

may be known by the absence of a blackish-green color when a small portion of the clear tincture is treated with a drop or two of tincture of ferric chloride. Insert a plug of absorbent cotton into a suitable percolator, and introduce the mixture. As soon as the liquid has disappeared from the surface, pour on enough Diluted Alcohol to make the product measure 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation is practically identical, in strength of Cinchona (without the tannin), with the official *Tinctura Cinchonæ*.

TINCTURA COTO.

Tincture of Coto.

	Metric.	*Apothecaries'.*
Coto bark, finely bruised	125 Gm.	4 troy ounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Macerate the Coto with 750 Cc. (or 24 fluidounces) of Alcohol during seven days; then pour off the liquid, press the residue, and filter the united liquids through paper. Lastly, transfer the residue to the filter and wash it with enough Alcohol to make the product measure 1000 Cc. (or 32 fluidounces).

Average dose: 4 Cc. (1 fluidrachm).

Note.—Coto bark is derived from an undetermined tree, probably belonging to the natural order Lauraceæ, and is obtained from Bolivia. There are two varieties known, one as "Coto," and the other as "Paracoto" bark. True Coto bark is, at times, difficult to obtain in the market, and the Paracoto bark is then frequently substituted for it. While they possess some useful properties in common, yet they differ materially in other respects. Hence, the Paracoto bark should not be substituted for the true Coto bark.

TINCTURA CRESOLI SAPONATA.

Saponated Tincture of Cresol.

	Metric.	*Apothecaries'.*
Cresol (U. S. P.)	350 Gm.	10½ troy ounces.
Soft Soap (U. S. P.)	450 Gm.	13½ troy ounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Cresol and Soft Soap in sufficient Alcohol to make 1000 Cc. (or 32 fluidounces), and filter in a well-covered funnel.

TINCTURA FERRI CHLORIDI ÆTHEREA.

Ethereal Tincture of Ferric Chloride.

Bestucheff's Tincture. Lamotte's Drops.

	Metric.	*Apothecaries'.*
Solution of Ferric Chloride (U. S. P.)	59 Cc.	15 fluidrachms.
Ether (U. S. P.)	250 Cc.	8 fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Solution of Ferric Chloride with 625 Cc. (or 20 fluidounces) of Alcohol, add the Ether, and lastly, enough Alcohol to make 1000 Cc. (or 32 fluidounces). Introduce the Tincture into bottles made of white (flint) glass, which should not be entirely filled. Cork them tightly and expose them to the rays of the sun, until the Tincture has been completely decolorized. Then remove the bottles to a shady place, and open them occasionally, until the contents have again assumed a yellow color. Lastly, transfer the tincture to bottles, which should be well stoppered and kept in a cool and dark place.

4 Cc. (1 fluidrachm) represent about 0.032 Gm. (½ grain) of metallic Iron.

Average dose : 4 Cc. (1 fluidrachm).

Note.—This preparation is practically identical with that which is official in the G. P.

TINCTURA FERRI CITRO-CHLORIDI.

Tincture of Citro-Chloride of Iron.

Tasteless Tincture of Ferric Chloride. Tasteless Tincture of Iron.

	Metric.	*Apothecaries'.*
Solution of Ferric Chloride (U. S. P.)	350 Cc.	11 fluidounces.
Sodium Citrate	425 Gm.	13 troy ounces.
Alcohol	157 Cc.	5 fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Solution of Chloride of Iron with 150 Cc. (or 5 fluidounces) of Water, and dissolve in this mixture the Sodium Citrate with the aid of a gentle heat. Then add the Alcohol, and when the solution has become cold, make up the volume with water to 1000 Cc. (or 32 fluidounces). Set the product aside in a cold place for a few days, if convenient, so that the excess of saline matter may separate. Then filter, and pass enough cold Water through the filter to restore the original volume.

4 Cc. (1 fluidrachm) contain an amount of Iron equivalent to about 0.5 Gm. (7½ grains) of dry Ferric Chloride.

Average dose: 0.65 Cc. (10 minims).

Note.—This preparation is practically identical in the strength of iron, but not in the quantity of alcohol, with the official *Tinctura Ferri Chloridi.*

TINCTURA FERRI POMATA.

Tincture of Ferrated Extract of Apples.

Tinctura Ferri Malatis Crudi. Tincture of Crude Malate of Iron.

	Metric.	*Apothecaries'.*
Ferrated Extract of Apples (N. F.)	100 Gm.	3 troy ounces.
Alcohol	100 Cc.	3 fluidounces.
Cinnamon Water (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Ferrated Extract of Apples in 750 Cc. (or 24 fluidounces) of Cinnamon Water, add the Alcohol, filter, and pass enough Cinnamon Water through the filter to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.008 Gm. (⅛ grain) of metallic Iron.

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation is practically identical with that official in the G. P.

TINCTURA GUAIACI COMPOSITA.

Compound Tincture of Guaiac.

Dewees' Tincture of Guaiac.

	Metric.	*Apothecaries'.*
Guaiac (U. S. P.)	125 Gm.	4 troy ounces.
Potassium Carbonate	6 Gm.	90 grains.
Pimenta, in moderately fine powder	32 Gm.	1 troy ounce.
Pumice, in fine powder	65 Gm.	2 troy ounces.
Alcohol	435 Cc.	14 fluidounces.
Water	435 Cc.	14 fluidounces.
Diluted Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Guaiac and Potassium Carbonate with the Pimenta and the Pumice, and afterwards gradually with the Alcohol. Next slowly add the Water and triturate the mixture thoroughly. Then filter, and pass enough Diluted Alcohol through the filter to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 0.5 Gm. (7½ grains) of Guaiac.

Average dose: 4 Cc. (1 fluidrachm).

TINCTURA IODI, CHURCHILL.

Churchill's Tincture of Iodine.

	Metric.	*Apothecaries'.*
Iodine	165 Gm.	5 troy ounces.
Potassium Iodide	33 Gm.	1 troy ounce.
Water	250 Cc.	8 fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Potassium Iodide in the Water, then add the Iodine, and lastly, enough Alcohol to make the Tincture, when completed, measure 1000 Cc. (or 32 fluidounces).

Note.—Churchill's Tincture of Iodine should not be confounded with Churchill's Iodine Caustic (*Liquor Iodi Causticus*, N. F., p. 91).

TINCTURA IODI DECOLORATA.

Decolorized Tincture of Iodine.

	Metric.	*Apothecaries'.*
Iodine	83 Gm.	2½ troy ounces.
Sodium Thiosulphate (U. S. P.)	83 Gm.	2½ troy ounces.
Water	100 Cc.	3 fluidounces.
Stronger Ammonia Water (U. S. P.)	65 Cc.	2 fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Digest the Iodine, Sodium Thiosulphate, and Water, at a gentle heat, until a perfect solution, of a dark reddish-brown color, is produced. Then add 125 Cc. (or 4 fluidounces) of Alcohol, and afterwards, the Stronger Ammonia Water. Shake a few minutes until no more bubbles of gas escape, and the liquid has became colorless, with a whitish precipitate (of sulphur) suspended in it. Cool it, if necessary, and add enough Alcohol to make 1000 Cc. (or 32 fluidounces). Place the bottle containing it in a refrigerator for a few hours, or longer if convenient, then filter, in a covered funnel, and preserve the liquid for use.

Note.—On prolonged standing a crystalline precipitate, of sodium tetrathionate, will usually form in the liquid. This may be removed by filtration.

TINCTURA JALAPÆ.

Tincture of Jalap.

	Metric.	*Apothecaries'.*
Jalap, in fine powder	200 Gm.	6 troy ounces.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix *two* (2) *volumes* of Alcohol with *one* (1) *volume* of Water. Percolate the Jalap with this mixture, in the usual manner, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

Average dose: 4 Cc. (1 fluidrachm).

TINCTURA JALAPÆ COMPOSITA.

Compound Tincture of Jalap.

	Metric.	*Apothecaries'.*
Jalap, in fine powder	125 Gm.	4 troy ounces.
Scammony, in powder	32 Gm.	1 troy ounce.
Alcohol, Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix *two* (2) *volumes* of Alcohol, with *one* (1) *volume* of Water. Mix the powders with half their weight of sand; moisten the mixture with a sufficient quantity of the menstruum, pack it in a percolator, and percolate it with the menstruum, in the usual manner, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

Average dose: 4 Cc. (1 fluidrachm).

TINCTURA KINO COMPOSITA.

Compound Tincture of Kino.

	Metric.	*Apothecaries'.*
Tincture of Kino (U. S. P.)	200 Cc.	6 fluidounces.
Tincture of Opium (U. S. P.)	100 Cc.	3 fluidounces.
Spirit of Camphor (U. S. P.)	65 Cc.	2 fluidounces.
Oil of Cloves	1.5 Cc.	22 minims.
Cochineal, in powder	8.5 Gm.	120 grains.
Aromatic Spirit of Ammonia (U. S. P.)	8 Cc.	120 minims.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Cochineal with the Aromatic Spirit of Ammonia, and gradually add 625 Cc. (or 20 fluidounces) of Diluted Alcohol. Then add the two Tinctures, the Spirit of Camphor, and the Oil of Cloves, and filter the mixture through paper. Lastly, pass enough Diluted Alcohol through the filter to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.033 Gm. (½ grain), each, of Kino and Powdered Opium.

Average dose: 4 Cc. (1 fluidrachm).

TINCTURA PAPAVERIS.

Tincture of Poppy.

	Metric.	*Apothecaries'.*
Poppy capsules, freed from seeds, and in coarse powder	500 Gm.	16 troy ounces.
Glycerin	125 Cc.	4 fluidounces.
Alcohol,		
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Digest the Poppy capsules with 3000 Cc. (or 96 fluidounces) of boiling Water during two hours, then express and strain. Evaporate the strained liquid to 500 Cc. (or 16 fluidounces), mix it with 250 Cc. (or 8 fluidounces) of Alcohol, and set the mixture aside, well covered, until it is quite cold. Then filter, add the Glycerin to the filtrate, and pass enough of a mixture of *two* (2) *volumes* of Water and *one* (1) *volume* of Alcohol through the filter, to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 2 Gm. (30 grains) of Poppy (Capsule) freed from seeds.

Average dose: 2 Cc. (30 minims).

TINCTURA PECTORALIS.

Pectoral Tincture.

Guttæ Pectorales. Pectoral Drops. Bateman's Pectoral Drops.

	Metric.	*Apothecaries'.*
Tincture of Opium (U. S. P.)	42 Cc.	640 minims.
Compound Tincture of Gambir [Catechu] (U. S. P.)	64 Cc.	2 fluidounces.
Spirit of Camphor (U. S. P.)	40 Cc.	600 minims.
Oil of Anise	1 Cc.	15 minims.
Caramel	16 Cc.	½ fluidounce.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the first five ingredients with enough Diluted Alcohol to make 1000 Cc. (or 32 fluidounces), and filter.

4 Cc. (1 fluidrachm) contain 0.165 Cc. (2½ minims) of Tincture of Opium.

Average dose: Infants, 0.65 Cc. (10 minims).

TINCTURA PERSIONIS.

Tincture of Cudbear.

	Metric.	*Apothecaries'.*
Cudbear, in fine powder	125 Gm.	4 troy ounces.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Pack the Cudbear in a suitable percolator, and percolate it with a mixture of *one* (1) *volume* of Alcohol and *two* (2) *volumes* of Water until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

Note.—This preparation is intended as a coloring agent, when a bright-red tint or color is to be produced, particularly in acid liquids.

TINCTURA PERSIONIS COMPOSITA.

Compound Tincture of Cudbear.

	Metric.	*Apothecaries'.*
Cudbear	16.5 Gm.	240 grains.
Caramel	100 Gm.	3 troy ounces.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix *one* (1) *volume* of Alcohol with *two* (2) *volumes* of Water. Macerate the Cudbear with 750 Cc. (or 24 fluidounces) of the menstruum, during twelve hours, agitating occasionally; filter through paper, and add the Caramel, previously dissolved in 125 Cc. (or 4 fluidounces) of Water. Then pass enough of the before-mentioned menstruum through the filter to make the whole measure 1000 Cc. (or 32 fluidounces).

Note.—This preparation is intended as a coloring agent, when a brownish-red tint or color is to be produced.

TINCTURA PIMPINELLÆ.

Tincture of Pimpinella.

	Metric.	*Apothecaries'.*
Pimpinella, root	165 Gm.	5 troy ounces.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix *two* (2) *volumes* of Alcohol with *one* (1) *volume* of Water. Macerate the Pimpinella, reduced to a moderately coarse (No. 40) powder, with enough of the menstruum to keep it distinctly damp during twelve hours. Then percolate it with the same menstruum, in the

usual manner, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation is approximately of the same strength as that which is official in the *G. P.* Pimpinella root is derived from *Pimpinella Saxifraga* Linné, and *Pimpinella magna* Linné.

TINCTURA RHEI AQUOSA.

Aqueous Tincture of Rhubarb.

	Metric.	*Apothecaries'.*
1. Rhubarb	100 Gm.	3 troy ounces.
Sodium Borate	10 Gm.	145 grains.
Potassium Carbonate	10 Gm.	145 grains.
Cinnamon Water (U. S. P.)	125 Cc.	4 fluidounces.
Alcohol	110 Cc.	3½ fluidounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Sodium Borate and the Potassium Carbonate in 750 Cc. (or 24 fluidounces) of Water, and macerate in this solution, during twenty-four hours, the Rhubarb, cut into thin slices and carefully freed from any adhering fine powder. Then strain it through muslin, heat the strained liquid to boiling, add the Cinnamon Water and Alcohol, stir it well and filter, while warm, in a covered funnel. To the cold filtrate add enough Water to make the product measure 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent about 0.375 Gm. (5⅔ grains) of Rhubarb.

Average dose: 4 Cc. (1 fluidrachm).

Note.—The product is practically identical with that obtained by the process of the G. P., in which this preparation is official. It is liable to deteriorate when kept too long, and should not be prepared in larger quantity than may be consumed within a short time.

When this preparation is required for immediate use, and it is not otherwise obtainable, it may be prepared in the following manner:

	Metric.	*Apothecaries'.*
2. Fluidextract of Rhubarb (U. S. P.)	10 Cc.	150 minims.
Sodium Borate	1 Gm.	15 grains.
Potassium Carbonate	1 Gm.	15 grains.
Cinnamon Water (U. S. P.)	12.5 Cc.	190 minims.
Alcohol	5 Cc.	75 minims.
Water, a sufficient quantity		
To make	100 Cc.	5 fluidounces.

Dissolve the Sodium Borate and the Potassium Carbonate in about 50 Cc. (or 1½

fluidounces) of Water. Add the Cinnamon Water, Alcohol, and Fluidextract of Rhubarb, and lastly, enough Water to make the product measure 100 Cc. (or 3 fluidounces). Filter, if necessary.

TINCTURA RHEI ET GENTIANÆ.

Tincture of Rhubarb and Gentian.

	Metric.	*Apothecaries'.*
1. Rhubarb	70 Gm.	2⅛ troy ounces.
Gentian	17.5 Gm.	256 grains.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the solids to a moderately coarse (No. 40) powder, and percolate it, in the usual manner, with Diluted Alcohol, until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

4 Cc. (1 fluidrachm) represent 0.26 Gm. (4 grains) of Rhubarb and 0.065 Gm. (1 grain) of Gentian.

Average dose: 4 Cc. (1 fluidrachm).

Note.—When this preparation is required for immediate use, and it is not otherwise obtainable, it may be prepared in the following manner:

	Metric.	*Apothecaries'.*
2. Fluidextract of Rhubarb (U. S. P.)	70 Cc.	17 fluidrachms.
Fluidextract of Gentian (U. S. P.)	17.5 Cc.	256 minims.
Diluted Alcohol (U. S. P.), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Fluidextracts with enough Diluted Alcohol to make 1000 Cc. (or 32 fluidounces) and filter.

TINCTURA RHEI VINOSA.

Vinous Tincture of Rhubarb.

	Metric.	*Apothecaries'.*
Fluidextract of Rhubarb (U. S. P.)	80 Cc.	2½ fluidounces.
Fluidextract of Bitter Orange Peel (U. S. P.)	20 Cc.	5 fluidrachms.
Tincture of Cardamom (U. S. P.)	80 Cc.	2½ fluidounces.
Sugar	125 Gm.	4 fluidounces.
Sherry Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Fluidextracts and the Tincture with 500 Cc. (or 16 fluidounces) of Sherry Wine. In this dissolve the Sugar by agitation, then

add enough Sherry Wine to make 1000 Cc. (or 32 fluidounces), and filter.

Average dose: 4 Cc. (1 fluidrachm).

Note.—This preparation corresponds, in strength, to that which is official under the same name in the G. P.

TINCTURA SAPONIS VIRIDIS COMPOSITA.

Compound Tincture of Green Soap.

	Metric.	*Apothecaries'.*
Soft Soap (U. S. P.)	150 Gm.	4½ troy ounces.
Oil of Cade	20 Cc.	5 fluidrachms.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Soft Soap in 750 Cc. (or 24 fluidounces) of Alcohol, add the Oil of Cade, and then enough Alcohol to make the product measure 1000 Cc. (or 32 fluidounces), and filter.

TINCTURA TOLUTANA ÆTHEREA.

Ethereal Tincture of Tolu.

	Metric.	*Apothecaries'.*
Balsam of Tolu	16.5 Gm.	½ troy ounce.
Alcohol	62.5 Cc.	2 fluidounces.
Ether (U. S. P.)	16 Cc.	½ fluidounce.

Dissolve the Balsam of Tolu in the Alcohol by agitation; filter the solution through a pledget of cotton placed in the neck of a funnel, add the Ether to the filtrate, and mix well.

Note.—This Ethereal Tincture is to be used for "tolu-coating" Pills (see p. 121).

TINCTURA TOLUTANA SOLUBILIS.

Soluble Tincture of Tolu.

	Metric.	*Apothecaries'.*
Balsam of Tolu	100 Gm.	3 troy ounces.
Magnesium Carbonate	10 Gm.	145 grains.
Glycerin	400 Cc.	12 fluidounces.
Water,		
Alcohol, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix 200 Cc. (or 6 fluidounces) of Alcohol with the Glycerin, and dissolve the Balsam of Tolu in the mixture with the aid of heat, avoiding loss by evaporation. Next add 400 Cc. (or 12 fluidounces) of

Water, and allow the mixture to become cold. Pour off the milky liquid from the resinous precipitate (which latter is to be rejected), mix it with the Magnesium Carbonate, by trituration, and filter. Lastly, pass enough of a mixture of *one* (1) *volume* of Alcohol and *two* (2) *volumes* of Water through the filter, to make the whole filtrate measure 1000 Cc. (or 32 fluidounces).

Average dose: 2 Cc. (30 minims)

Note.—This preparation may be added to Syrup or Water without producing cloudiness. A mixture of 32 Cc. (or 1 fluidounce) of this preparation with 468 Cc. (or 15 fluidounces) of Syrup yields a product which may be used as Syrup of Tolu in all cases where the official preparation is not required.

TINCTURA VANILLINI COMPOSITA.

Compound Tincture of Vanillin.

Compound Essence of Vanillin.

	Metric.	*Apothecaries'.*
Vanillin	6.5 Gm.	90 grains.
Cumarin	0.4 Gm.	6 grains.
Alcohol	200 Cc.	6 fluidounces.
Glycerin	125 Cc.	4 fluidounces.
Syrup (U. S. P.)	125 Cc.	4 fluidounces.
Compound Tincture of Cudbear (N. F.)	16 Cc.	½ fluidounce.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Vanillin and Cumarin in the Alcohol, add the Glycerin, Syrup, and Compound Tincture of Cudbear, and lastly, enough Water to make 1000 Cc. (or 32 fluidounces).

TINCTURA VIBURNI OPULI COMPOSITA.

Compound Tincture of Viburnum.

	Metric.	*Apothecaries'.*
Viburnum Opulus	35 Gm.	1 troy ounce.
Dioscorea	35 Gm.	1 troy ounce.
Scullcap	10 Gm.	145 grains.
Cloves	50 Gm.	1½ troy ounces.
Cinnamon	65 Gm.	2 troy ounces.
Glycerin	65 Cc.	2 fluidounces.
Alcohol,		
Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the drugs to a moderately coarse (No. 40) powder. Mix the Glycerin with 750 Cc. (or 24 fluidounces) of Alcohol and moisten the powder with 150 Cc. (or 5 fluidounces) of this Mixture, and macerate

for 48 hours in a percolator. Then percolate with the remainder of this menstruum, followed by a mixture of *five* (5) *volumes* of Alcohol and *one* (1) *volume* of Water, until 1000 Cc. (or 32 fluidounces) of tincture are obtained.

Average dose: 4 Cc. (1 fluidrachm.)

TINCTURA ZEDOARIÆ AMARA.

Bitter Tincture of Zedoary.

Compound Tincture of Zedoary.

	Metric.	*Apothecaries'.*
Zedoary	250 Gm.	8 troy ounces.
Aloes	125 Gm.	4 troy ounces.
Rhubarb	62 Gm.	2 troy ounces.
Gentian	62 Gm.	2 troy ounces.
White Agaric	62 Gm.	2 troy ounces.
Saffron	62 Gm.	2 troy ounces.
Glycerin	125 Cc.	4 fluidounces.
Alcohol, Water, of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the solids to a moderately coarse (No. 40) powder, moisten this with a sufficient quantity of a mixture of *two* (2) *volumes* of Alcohol and *one* (1) *volume* of Water, and percolate it in the usual manner, with this menstruum, until 750 Cc. (or 24 fluidounces) of percolate are obtained. Add to this the Glycerin and set it aside. Then continue the percolation, until the drugs are practically exhausted, evaporate the new percolate to 125 Cc. (or 4 fluidounces), and add it to the reserved portion.

4 Cc. (1 fluidrachm) represent 1 Gm. (15 grains) of Zedoary, 0.5 Gm. (7½ grains) of Aloes, and 0.25 Gm. (3¾ grains), each, of the other drugs.

Average dose: 4 Cc. (1 fluidrachm).

Note.—The above preparation is not identical with the *Tinctura Zedoariæ Composita* (also known as *Tinctura Carminativa*, *Tinctura Wedelii*) which was formerly official in some European Pharmacopœias.

TINCTURÆ ÆTHEREÆ.

Ethereal Tinctures.

General Formula.

	Metric.	*Apothecaries'.*
The Drug, properly comminuted	100 Gm.	3 troy ounces.
Alcohol, Ether (U. S. P.), of each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Percolate the Drug in the usual manner, but with proper precautions to avoid loss of menstruum by evaporation, with a mixture of *one* (1) *volume* of Ether, and *two* (2) *volumes* of Alcohol, until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

Note.—This formula is to be used, when Ethereal Tinctures of Belladonna, Castor, Digitalis, Lobelia, Valerian, or of other drugs, are to be prepared.

UNGUENTA EXTENSA.

(Steatina—Steatins.)

"Salve Mulls."

Salve Mulls, introduced in dermatologic practice by Dr. Unna, are ointments of high fusing points, containing the desired medicinal agent, and spread on gauze or "mull," in a manner similar to the ordinary spread plasters. Although these salve mulls are more conveniently produced with the aid of special mechanical appliances, it is quite practicable to prepare them on a limited scale as follows:

A sheet of moistened parchment paper is spread smoothly on a table-top, the excess of moisture wiped off with a cloth, and a corresponding piece of unsized gauze is evenly stretched upon the parchment paper and held in place with thumb-tacks. The previously melted and partly cooled ointment is then spread evenly on the gauze by means of a broad, flat bristle-brush, and when a sufficient layer has been applied in this way, the surface is smoothed by the aid of two elastic spatulas, heated by immersion in hot water, wiped dry, and used alternately to expedite this operation. A smooth surface having been attained, the thumb-tacks are removed, and the salve-mull is withdrawn from the parchment paper, this operation being facilitated by wrapping the uncoated end of the gauze over a flat stick of wood. The salve mull is then suspended on a string in a cool room, and when thoroughly chilled, it is covered with paraffin paper and rolled up.

The most suitable base for preparing the salve mulls is a mixture of Suet and Lard, in variable proportions, with the occasional addition of Wax or Lead Plaster—this depending on the nature of the medicinal component, or the intended use. The following formulas may serve as examples:

1. Unguentum Zinci Extensum, 10 per cent.—Zinc Salve Mull (10%).

Zinc Oxide	10 parts.
Benzoinated Suet	70 parts.
Benzoinated Lard	20 parts.

2. Unguentum Salicylatum Extensum, 10 per cent.—Salicylic Acid Salve Muli (10%).

Salicylic Acid	10 parts.
Benzoinated Suet	80 parts.
Benzoinated Lard	10 parts.

3. Unguentum Hydrargyri Chloridi Corrosivi Extensum, 0.2 per cent.—Corrosive Mercuric Chloride Salve Mull (0.2%).

Corrosive Mercuric Chloride	2 parts.
Alcohol	50 parts.
Benzoinated Suet	900 parts.
Benzoinated Lard	50 parts.

4. Unguentum Creosoti Salicylatum Extensum, 20:10 per cent.—Creosote-Salicylic Acid Salve Mull (20:10%).

Salicylic Acid	10 parts.
Creosote	20 parts.
Yellow Wax	5 parts.
Benzoinated Suet	65 parts.

UNGUENTUM CALAMINÆ.

Calamine Ointment.

Unguentum Zinci Carbonatis (Impuri). Unguentum Calaminare. Turner's Cerate.

Prepared Calamine	1 part.
Ointment (U. S. P.)	5 parts.

Mix them intimately, by trituration, so as to produce a smooth and homogeneous ointment.

UNGUENTUM CAMPHORÆ.

Camphor Ointment.

Unguentum Camphoratum.

Camphor, in coarse powder	2 parts.
White Wax	1 parts.
Lard	6 parts.

Melt the White Wax and Lard with a gentle heat, then add the Camphor, and stir the Ointment until it is cold.

UNGUENTUM FUSCUM.

Brown Ointment.

Unguentum Matris. Mother's Salve.

Camphorated Brown Plaster (N. F.)	2 parts.
Olive Oil	1 part.
Suet	1 part.

Melt them together, and stir the mass until it is cold.

UNGUENTUM PICIS COMPOSITUM.

Compound Tar Ointment.

Oil of Tar	4 parts.
Tincture of Benzoin (U. S. P.)	2 parts.
Zinc Oxide	3 parts.
Yellow Wax	25 parts.
Lard	32 parts.
Cotton Seed Oil	35 parts.

Melt the Yellow Wax and Lard with the Cotton Seed Oil at a gentle heat. Add the Tincture of Benzoin, and continue heating until all the Alcohol has evaporated. Then withdraw the heat, add the Oil of Tar, and finally the Zinc Oxide, incorporating the latter thoroughly, so that on cooling, a smooth, homogeneous ointment may result.

UNGUENTUM RESORCINI COMPOSITUM.

Compound Resorcin Ointment.

"Soothing Ointment."

Resorcinol (U. S. P.)	6 parts.
Zinc Oxide	6 parts.
Bismuth Subnitrate	6 parts.
Oil of Cade	12 parts.
Paraffin	10 parts.
Petrolatum	25 parts.
Hydrous Wool Fat	35 parts.

Triturate the Resorcinol, Zinc Oxide, and Bismuth Subnitrate, with a small quantity of the Hydrous Wool Fat, until a perfectly smooth mixture is obtained. Incorporate this with the remainder of the Wool Fat, add the Paraffin and Petrolatum, previously melted together, and lastly, the Oil of Cade. Mix intimately, and preserve the Ointment in containers protected from the light.

UNGUENTUM SULPHURIS COMPOSITUM.

Compound Sulphur Ointment.

Wilkinson's Ointment. Hebra's Itch Ointment.

Precipitated Calcium Carbonate	10 parts.
Sublimed Sulphur	15 parts.
Oil of Cade	15 parts.
Soft Soap (U. S. P.)	30 parts.
Lard	30 parts.

Mix the Lard with the Soft Soap and Oil of Cade. Then gradually incorporate the Sublimed Sulphur and Precipitated Calcium Carbonate.

VINUM AURANTII.

Wine of Orange.

	Metric.	*Apothecaries'.*
Oil of Bitter Orange	1 Cc.	15 minims.
Alcohol	10 Cc.	150 minims.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Sherry Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Purified Talc, first with the Alcohol, in which the Oil of Bitter Orange has previously been dissolved, and afterwards with 750 Cc. (or 24 fluidounces) of Sherry Wine, gradually added. Filter the mixture through a wetted filter, returning the first portions until it runs through clear, and, lastly, pass enough Sherry Wine through the filter to make 1000 Cc. (or 32 fluidounces).

VINUM AURANTII COMPOSITUM.

Compound Wine of Orange.

Elixir Aurantiorum Compositum. Compound Elixir of Orange.

	Metric.	*Apothecaries'.*
Bitter Orange Peel	200 Gm.	6 troy ounces.
Absinthium	65 Gm.	2 troy ounces.
Menyanthes, leaves	65 Gm.	2 troy ounces.
Cascarilla	65 Gm.	2 troy ounces.
Cinnamon	43 Gm.	640 grains.
Gentian	43 Gm.	640 grains.
Potassium Carbonate	10 Gm.	150 grains.
Sherry Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Reduce the six first-named drugs to a moderately coarse (No. 40) powder, mix with this the Potassium Carbonate, moisten the mixture with Sherry Wine, and let it macerate during twenty-four hours. Then pack it in a percolator, and percolate with Sherry Wine, in the usual manner, until 1000 Cc. (or 32 fluidounces) of product are obtained.

Average dose: 4 Cc. (1 fluidrachm).

Note.—This Wine was formerly official in the G. P., which directed to macerate the Orange Peel, Cinnamon and Potassium Carbonate with Sherry Wine, and then to add the other drugs in form of Extracts. The proportions above given yield a product practically identical with this.

VINUM CARNIS.

Wine of Beef.

"Beef and Wine."

	Metric.	*Apothecaries'.*
Extract of Beef	33 Gm.	1 troy ounce.
Water, hot	62.5 Cc.	2 fluidounces.
Syrup (U. S. P.)	125 Cc.	4 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Compound Spirit of Orange (U. S. P.)	1 Cc.	15 minims.
Sherry Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Extract with hot Water, and add, with continuous stirring, the Alcohol. Allow the mixture to stand three days, or more; then filter, distill off the Alcohol, add the Compound Spirit of Orange and Syrup to the residue, and sufficient Wine to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) represent 0.132 Gm. (2 grains) of Extract of Beef.

Average dose: 8 Cc. (2 fluidrachms).

Note.—The Extract of Beef suitable for this preparation is that which is prepared by Liebig's method.

VINUM CARNIS ET FERRI.

Wine of Beef and Iron.

"Beef, Wine and Iron."

	Metric.	*Apothecaries'.*
Extract of Beef	33 Gm.	1 troy ounce.
Tincture of Citro-Chloride of Iron (N. F.)	32 Cc.	1 fluidounce.
Compound Spirit of Orange (U. S. P.)	1 Cc.	15 minims.
Water, hot	62.5 Cc.	2 fluidounces.
Alcohol	125 Cc.	4 fluidounces.
Syrup (U. S. P.)	125 Cc.	4 fluidounces.
Sherry Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Extract with the hot Water, and add, with continuous stirring, the Alcohol. Allow the mixture to stand three days or more; then filter, distill off the Alcohol, add the Compound Spirit of Orange, the Tincture, and the Syrup to the residue, and sufficient Wine to make 1000 Cc. (or 32 fluidounces). Filter, if necessary.

4 Cc. (1 fluidrachm) represent 0.13 Gm. (2 grains) of Extract of Beef, and 0.128 Cc. (2 minims) of Tincture of Citro-Chloride of Iron.

Average dose: 8 Cc. (2 fluidrachms.)

Note.—The Extract of Beef suitable for this preparation is that which is prepared by Liebig's method.

VINUM CARNIS, FERRI ET CINCHONÆ.

Wine of Beef, Iron and Cinchona.

"Beef, Wine, Iron and Cinchona."

	Metric.	*Apothecaries'.*
Quinine Sulphate	2 Gm.	30 grains.
Cinchonidine Sulphate	1 Gm.	15 grains.
Citric Acid	0.75 Gm.	11 grains.
Wine of Beef and Iron (N. F.)	1000 Cc.	32 fluidounces.

Reduce the Alkaloid Sulphates and the Acid to fine powder by trituration, and dissolve them in the Wine. Filter, if necessary.

4 Cc. (1 fluidrachm) represent about 0.13 Gm. (2 grains) of Extract of Beef, 0.128 Cc. (2 minims) of Tincture of Citro-Chloride of Iron, and small quantities of Cinchona Alkaloids.

Average dose: 4 Cc. (fluidrachm).

VINUM COCÆ AROMATICUM.

Aromatic Wine of Coca.

Vinum Erythroxyli Aromaticum.—Aromatic Wine of Erythroxylon.

	Metric.	*Apothecaries'.*
Fluidextract of Coca (U. S. P.)	65 Cc.	2 fluidounces.
Compound Elixir of Taraxacum (N. F.)	10 Cc.	150 minims.
Syrup of Coffee (N. F.)	25 Cc.	6 fluidrachms.
Port Wine	165 Cc.	5 fluidounces.
Aromatic Elixir (U. S. P.)	300 Cc.	9 fluidounces.
Sherry Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Fluidextract, Elixirs, Syrup and Port Wine, and add sufficient Sherry Wine to make 1000 Cc. (or 32 fluidounces). Let the mixture stand several days, if convenient, and filter.

32.5 Cc. (1 fluidounce) represent about 2 Gm. (30 grains) of Coca.

Average dose: 8 Cc. (2 fluidrachms).

VINUM FRAXINI AMERICANÆ.

Wine of White Ash.

	Metric.	*Apothecaries'.*
White Ash Bark, in No. 40 powder	500 Gm.	16 troy ounces.
Stronger White Wine (N. F. "*Appendix*"), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Macerate the Bark in 750 Cc. (or 24 fluidounces) of Stronger White Wine, in a covered vessel, during three days; then transfer it to a percolator, prepared for percolation, and allow the liquid to drain. When completely drained, pack the residue firmly, and gradually pour on Stronger White Wine, until the united drained liquid and percolate measure 1000 Cc. (or 32 fluidounces). Finally, filter the Wine, if necessary, and keep it in well-stoppered bottles, which should be completely filled, and stored in a cool place.

4 Cc. (1 fluidrachm) represent 2 Gm. (30 grains) of White Ash Bark.

Average dose: 4 Cc. (1 fluidrachm).

Note.—White Ash Bark is the inner bark of the trunk or root of *Fraxinus Americana*, L.

VINUM PEPSINI.

Wine of Pepsin.

"Pepsin Wine."

	Metric.	*Apothecaries'.*
Glycerite of Pepsin (N. F.)	200 Cc.	6 fluidounces.
Alcohol	100 Cc.	3 fluidounces.
Sherry Wine	700 Cc.	21 fluidounces.

Mix the Alcohol with the Wine, then add the Glycerite, and mix thoroughly.

4 Cc. (1 fluidrachm) represent 0.065 Gm. (1 grain) of Pepsin (U. S. P.).

Average dose: 8 Cc. (2 fluidrachms).

Note.—This preparation should be prepared fresh when needed.

VINUM PICIS.

Wine of Tar.

	Metric.	*Apothecaries'.*
Tar (U. S. P.)	100 Gm.	3 troy ounces.
Water	250 Cc.	8 fluidounces.
Pumice, in moderately fine powder, and well washed	125 Gm.	4 troy ounces.
Stronger White Wine (N. F. "*Appendix*"), a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Upon the Tar contained in a suitable vessel pour 250 Cc. (or 8 fluidounces) of cold Water, and triturate the mixture thoroughly; then pour off the Water and throw it away. Mix the remaining Tar thoroughly with the powdered Pumice, and add 1000 Cc. (or 32 fluidounces) of Stronger White Wine. Stir frequently during four hours, then transfer the mixture to a wetted filter, and, after the liquid has

passed, pour on enough Stronger White Wine to make the filtrate measure 1000 Cc. (or 32 fluidounces).

Average dose: 8 Cc. (2 fluidrachms).

VINUM PRUNI VIRGINIANÆ.

Wine of Wild Cherry.

	Metric.	*Apothecaries'.*
Wild Cherry, in No. 40 powder	250 Gm.	8 troy ounces.
Water	200 Cc.	6 fluidounces.
Alcohol	100 Cc.	3 fluidounces.
Sugar	165 Gm.	5 troy ounces.
Purified Talc (U. S. P.)	15 Gm.	½ troy ounce.
Angelica Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the Wild Cherry with the Water and transfer it to a percolator, prepared for percolation. Allow the percolator to remain well covered for 3 or 4 hours; then pack the moistened Wild Cherry moderately firm, and pour on sufficient of a mixture of 100 Cc. (or 3 fluidounces) of Alcohol and 650 Cc. (or 20 fluidounces) of the Wine, to leave a stratum above the Wild Cherry. When the liquid begins to drop, close the lower orifice, and continue the maceration for 12 hours. Then allow the percolation to proceed slowly, gradually adding the remainder of the mixture of Alcohol and Wine, followed by sufficient Wine to make 900 Cc. (or 29 fluidounces) of percolate. In this dissolve the Sugar, add the Purified Talc and mix thoroughly; then filter, returning the first portions of the filtrate until it runs through clear, and pass enough Wine through the filter to make 1000 Cc. (or 32 fluidounces).

4 Cc. (1 fluidrachm) represent 1 Gm. (15 grains) of Wild Cherry.

Average dose: 4 Cc. (1 fluidrachm).

VINUM PRUNI VIRGINIANÆ FERRATUM.

Ferrated Wine of Wild Cherry.

	Metric.	*Apothecaries'.*
Tincture of Citro-Chloride of Iron (N. F.)	80 Cc.	2½ fluidounces.
Wine of Wild Cherry (N. F.)	920 Cc.	29½ fluidounces.

Mix; allow the mixture to stand several days (or a week), if convenient, and filter, if necessary.

4 Cc. (1 fluidrachm) represent about 0.3 Cc. (5 minims) of Tincture of Citro-Chloride of Iron and about 0.9 Gm. (13¾ grains) of Wild Cherry.

Average dose: 4 Cc. (1 fluidrachm).

ZINCI OLEO-STEARAS.

Oleo-Stearate of Zinc.

	Metric.	*Apothecaries'.*
Zinc Acetate	90 Gm.	2½ troy ounces.
Stearic Acid (U. S. P.)	190 Gm.	5¼ troy ounces.
Oleic Acid (U. S. P.)	36 Gm.	1 troy ounce.
Potassium Hydroxide (U. S. P.)	36 Gm.	1 troy ounce.
Alcohol	1000 Cc.	30 fluidounces.
Distilled Water, a sufficient quantity.		

Dissolve the Oleic and Stearic Acids in 600 Cc. (or 18 fluidounces of Alcohol, by the aid of heat, and the Potassium Hydroxide in 400 Cc. (or 12 fluidounces) of Alcohol, by the aid of heat, and mix the hot solutions. Strain the mixture into a capacious vessel, and add to it 1000 Cc. (or 30 fluidounces) of hot Distilled Water. Dissolve the Zinc Acetate in 1000 Cc. (or 30 fluidounces) of boiling Distilled Water, filter the solution, if necessary, and pour it, in a thin stream, into the hot alcoholic solution first obtained, with constant stirring. Then stir the mixture occasionally until cool, transfer it to a muslin strainer, allow the precipitate to drain, wash it thoroughly on the strainer, with Distilled Water, and dry it in a moderately warm place. When dry, sift it through a very fine sieve.

APPENDIX

TO THE

NATIONAL FORMULARY.

FORMULAS FOR PREPARATION

DISMISSED FROM THE

UNITED STATES PHARMACOPOEIA IN 1890 AND 1900.

At each decennial revision of the U. S. P. a number of articles are dismissed, usually on the ground of insufficient importance or infrequency of use; but this dismissal does not by any means exclude them from occasional demand. In the case of preparations, this dismissal carries with it the formula, as a matter of course, and there is consequent danger that such formulas will in time be lost or, at all events, become unavailable when a legitimate demand comes for them. A number of such "obsolete" formulas from the U. S. P. 1870, and previous editions, for which a certain demand still existed in certain localities, were therefore included in the original edition of the N. F. (1888), but without reference to the source, and these are also included in the present revised edition without such reference. In the revised edition of the N. F. (1897) it was deemed desirable to include the formulas dismissed in the revision of 1890; but the formulas so included, although also carried in the text of the Formulary in the regular alphabetical order, were credited in each case to the pharmacopœial source. With the appearance of the U. S. P. VIII (1900), it has become necessary to include a further and not inconsiderable number of formulas for preparations, which, like those dismissed at previous revisions, should be preserved for possible use and reference. These, with the "obsolete" formulas from the U. S. P. 1880, are now presented in the following pages without modification, except in so far that, in conformity with the main text of the Formulary, the quantities are also given in the Alternative Apothecaries' System of Weights and Measures.

When these "obsolete" U. S. P. preparations are referred to in the text, they will be identified by the affix (N. F. "Appendix").

ACETUM LOBELIÆ.

Vinegar of Lobelia.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Lobelia, in No. 30 powder	100 Gm.	3 troy ounces.
Diluted Acetic Acid, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the powder with 50 Cc. (or 1½ fluidounces) of Diluted Acetic Acid, pack it firmly in a conical glass percolator, and gradually pour Diluted Acetic Acid upon it until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

ACETUM SANGUINARIÆ.

Vinegar of Sanguinaria.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Sanguinaria, in No. 30 powder	100 Gm.	3 troy ounces.
Diluted Acetic Acid, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the powder with 50 Cc. (or 1½ fluidounces) of Diluted Acetic Acid, pack it firmly in a conical glass percolator, and gradually pour Diluted Acetic Acid upon it until 1000 Cc. (or 32 fluidounces) of percolate are obtained.

AMYLUM IODATUM.

Iodized Starch.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Starch	95 Gm.	950 grains.
Iodine	5 Gm.	50 grains.
Distilled Water, a sufficient quantity.		

Triturate the Iodine with a little Distilled Water; add the Starch gradually and continue triturating until the compound assumes a uniform blue color, approaching to black. Dry it at a temperature not exceeding 40° C. (104° F.), and rub it to a fine powder.

Iodized Starch should be preserved in glass-stoppered vials.

ANTIMONII SULPHIDUM PURIFICATUM.

Purified Antimony Sulphide.

Purified Antimony Trisulphide—Sb_2S_3.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Antimony Sulphide	100 Gm.	3 troy ounces.
Ammonia Water	50 Cc.	1½ fluidounces.
Water, a sufficient quantity.		

Reduce the Antimony Sulphide to a very fine powder. Separate the coarser particles by elutriation, and, when the finely divided Sulphide has been deposited, pour off the water, add the Ammonia Water, and macerate for five days in a well closed vessel, agitating the mixture frequently. Then let the powder settle, pour off the Ammonia Water, and wash the residue by repeated affusion and decantation of water. Finally dry the product by the aid of a gentle heat.

ANTIMONIUM SULPHURATUM.

Sulphurated Antimony.

Kermes Mineral.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Purified Antimony Sulphide	100 Gm.	3 troy ounces.
Solution of Sodium Hydroxide	1200 Cc.	38 fluidounces.
Distilled Water,		
Diluted Sulphuric Acid each, a sufficient quantity.		

Mix the Purified Antimony Sulphide with the Solution of Sodium Hydroxide and 3000 Cc. (or 96 fluidounces) of Distilled Water, and boil the mixture over a gentle fire for two hours, with frequent stirring, and occasionally adding Distilled Water so as to preserve the same volume. Strain the liquid immediately through a double muslin strainer, and drop into it, while yet hot, Diluted Sulphuric Acid so long as it produces a precipitate. Wash the precipitate with hot Distilled Water until the washings are at most but very slightly clouded by barium chloride T. S.; then dry the precipitate at a temperature not exceeding 25° C. (77° F.), and rub it to a fine powder.

Keep the product in well-stoppered bottles, protected from light.

Note.—Kermes Mineral is composed chiefly of Antimony Trisulphide (Sb_2S_3), with a very small quantity of Antimony Trioxide.

CERATUM CETACEI.

Spermaceti Cerate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Spermaceti	100 Gm.	3 troy ounces.
White Wax	350 Gm.	10½ troy ounces.
Olive Oil	550 Gm.	16½ troy ounces.
To make	1000 Gm.	30 troy ounces.

Melt together the Spermaceti and White Wax; then add the Olive Oil previously heated, and stir the mixture constantly until it is cool.

CERATUM EXTRACTI CANTHARIDIS.

Cerate of Extract of Cantharides.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Cantharides, in No. 60 powder	300 Gm.	9⅝ troy ounces.
Resin	150 Gm.	4⅞ troy ounces.
Yellow Wax	350 Gm.	11¼ troy ounces.
Lard	350 Gm.	11¼ troy ounces.
Alcohol, a sufficient quantity.		

Moisten the Cantharides, with 180 Cc. (or 6 fluidounces) of Alcohol, and pack firmly in a cylindrical percolator; then gradually pour on Alcohol, until 1800 Cc. (or 60 fluidounces) of percolate are obtained, or until the Cantharides are exhausted. Distil off the Alcohol by means of a water-bath, transfer the residue to a tared capsule and evaporate it, on a water-bath, until it weighs 150 Gm. (or 4⅞ troy ounces). Add to this the Resin, Wax, and Lard, previously melted together, and keep the whole at a temperature of 100° C. (212° F.), for fifteen minutes. Lastly, strain the mixture through muslin, and stir it constantly until cool.

CERATUM SABINÆ.

Savine Cerate.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Fluidextract of Savine	25 Cc.	405 minims.
Resin Cerate	90 Gm.	2⅞ troy ounces.

Melt the Resin Cerate by means of a water-bath, add the Fluidextract of Savine, and continue the heat until the Alcohol has evaporated; then remove the heat, and stir constantly until cool.

CHARTA CANTHARIDIS.

Cantharides Paper.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
White Wax	80 Gm.	1235 grains.
Spermaceti	30 Gm.	463 grains.
Olive Oil	40 Gm.	615 grains.
Canada Turpentine	10 Gm.	154 grains.
Cantharides, in No. 40 powder	10 Gm.	154 grains.
Water	100 Cc.	27 fluidrachms.

Mix all the substances in a tinned vessel, and boil gently for two hours, constantly stirring. Strain through a woolen strainer without expressing, and, by means of a water-bath, keep the mixture in a liquid state in a shallow, flat-bottomed vessel with an extended surface. Coat strips of sized paper with the melted plaster, on one side only, by passing them successively over the surface of the liquid; when dry, cut the strips into rectangular pieces.

CHARTA POTASSII NITRATIS.

Potassium Nitrate Paper.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Potassium Nitrate	200 Gm.	6 troy ounces.
Distilled Water	800 Cc.	26 fluidounces.

Dissolve the Potassium Nitrate in the Distilled Water. Immerse strips of white, unsized paper in the solution, and dry them.

Keep the paper in well-closed vessels.

DECOCTUM CETRARIÆ.

Decoction of Cetraria.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Cetraria	50 Gm.	1½ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Cover the Cetraria, in a suitable vessel, with 400 Cc. (or 12 fluidounces) of cold Water, express after half an hour, and throw the liquid away. Then boil the Cetraria with 1000 Cc. (or 32 fluidounces) of Water for half an hour, strain, and add enough cold Water, through the strainer, to make the product, when cold, measure 1000 Cc. (or 32 fluidounces).

DECOCTUM SARSAPARILLÆ COMPOSITUM.

Compound Decoction of Sarsaparilla.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Sarsaparilla, cut and bruised	100 Gm.	3 troy ounces.
Sassafras, in No. 20 powder	20 Gm.	290 grains.
Guaiacum Wood, rasped	20 Gm.	290 grains.
Glycyrrhiza, bruised	20 Gm.	290 grains.
Mezereum, cut and bruised	10 Gm.	145 grains.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Boil the Sarsaparilla and Guaiacum Wood for half an hour in a suitable vessel with 1000 Cc. (or 32 fluidounces) of Water. Then add the Sassafras, Glycyrrhiza and Mezereum, cover the vessel well, and macerate for two hours. Finally strain, and add enough cold Water, through the strainer, to make the product measure 1000 Cc. (or 32 fluidounces).

EMPLASTRUM AMMONIACI.

Ammoniac Plaster.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Ammoniac	100 Gm.	3 troy ounces.
Diluted Acetic Acid	140 Cc.	4½ fluidounces.

Digest the Ammoniac with the Diluted Acetic Acid, in a suitable vessel, avoiding contact with metals, until it is entirely emulsionized; then strain and evaporate the strained liquid, by means of a water-bath, stirring constantly, until a small portion, taken from the vessel, hardens on cooling.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO.

Ammoniac Plaster with Mercury.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Ammoniac	720 Gm.	23 troy ounces.
Mercury	180 Gm.	5¾ troy ounces.
Oleate of Mercury	8 Gm.	122 grains.
Diluted Acetic Acid	1000 Cc.	32 fluidounces.
Lead Plaster, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Digest the Ammoniac with the Diluted Acetic Acid, in a suitable vessel, avoiding contact with metals, until it is entirely emulsified; then strain, and evaporate the strained liquid by means of a water-bath, stirring constantly, until a small portion, taken from the vessel, hardens on cooling. Triturate the Oleate of Mercury with the Mercury gradually added, until globules of the metal cease to be visible. Next add, gradually, the Ammoniac, while yet hot; and finally, having added enough Lead Plaster, previously melted by means of a water-bath, to make the mixture weigh 1000 Gm. (or 32 troy ounces), mix the whole thoroughly.

EMPLASTRUM ARNICÆ.

Arnica Plaster.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Extract of Arnica Root (N. F. Appendix) . .	330 Gm.	10½ troy ounces.
Resin Plaster	670 Gm.	21½ troy ounces.
To make	1000 Gm.	32 troy ounces.

Add the Extract to the Plaster, previously melted by means of a water-bath, and mix them thoroughly.

EMPLASTRUM ASAFŒTIDÆ.

Asafetida Plaster.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Asafetida	35 Gm.	540 grains.
Lead Plaster	35 Gm.	540 grains.
Galbanum	15 Gm.	230 grains.
Yellow Wax	15 Gm.	230 grains.
Alcohol	120 Cc.	4 fluidounces.

Digest the Asafetida and Galbanum with the Alcohol on a water-bath, separate the liquid portion, while hot, from the coarser impurities by straining, and evaporate it to the consistence of honey; then add the Lead Plaster and the Wax, previously melted together, stir the mixture well, and evaporate to the proper consistence.

EMPLASTRUM FERRI.

Iron Plaster.

Strengthening Plaster.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Ferric Hydroxide, dried at a temperature not exceeding 80° C. (176° F.)	90 Gm.	2⅞ troy ounces.
Olive Oil	50 Gm.	1⅝ troy ounces.
Burgundy Pitch	140 Gm.	4½ troy ounces.
Lead Plaster	720 Gm.	23 troy ounces.
To make	1000 Gm.	32 troy ounces.

Melt the Lead Plaster and Burgundy Pitch by means of a water-bath, and add the Olive Oil; then add the Ferric Hydroxide, and stir constantly until the mixture thickens on cooling.

EMPLASTRUM GALBANI.

Galbanum Plaster.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Galbanum	16 Gm.	240 grains.
Turpentine	2 Gm.	30 grains.
Burgundy Pitch	6 Gm.	90 grains.
Lead Plaster	76 Gm.	2½ troy ounces.

To the Galbanum and Turpentine, previously melted together and strained, add, first, the Burgundy Pitch, then the Lead Plaster, melted over a gentle fire, and mix the whole thoroughly.

EMPLASTRUM PICIS BURGUNDICÆ.

Burgundy Pitch Plaster.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Burgundy Pitch	800 Gm.	24 troy ounces.
Olive Oil	50 Gm.	1½ troy ounces.
Yellow Wax	150 Gm.	4½ troy ounces.
To make	1000 Gm.	30 troy ounces.

Melt together the Burgundy Pitch and Yellow Wax, then incorporate the Olive Oil, and stir constantly, until the mass thickens on cooling.

EMPLASTRUM PICIS CANADENSIS.

Canada Pitch Plaster.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Canada Pitch	90 Gm.	1350 grains.
Yellow Wax	10 Gm.	150 grains.

Melt them together, strain the mixture, and stir constantly until it thickens on cooling.

EMPLASTRUM PICIS CANTHARIDATUM.

Cantharidal Pitch Plaster.

Warming Plaster.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Cantharides Cerate	80 Gm.	2½ troy ounces.
Burgundy Pitch, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Melt the Cantharides Cerate on a water-bath containing boiling water, and continue the heat for fifteen minutes; then strain it through a piece of muslin of close texture so that the Cantharides will be retained on the muslin. To the strained liquid add a sufficient quantity of Burgundy Pitch to make the whole weigh 1000 Cc. (or 32 troy ounces), render the mixture homogeneous by stirring, remove the heat, and stir the mass until it thickens on cooling.

EMPLASTRUM RESINÆ.

Resin Plaster.

Adhesive Plaster.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Resin, in fine powder	140 Gm.	4½ troy ounces.
Lead Plaster	800 Gm.	25½ troy ounces.
Yellow Wax	60 Gm.	2 troy ounces.
To make	1000 Gm.	32 troy ounces.

Melt the Lead Plaster and Yellow Wax together with a gentle heat; then add the Resin, and, when it is melted, mix the mass thoroughly.

EMULSUM AMMONIACI.

Emulsion of Ammoniac.

Mistura Ammoniaci.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Ammoniac	40 Gm.	1¼ troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Rub the Ammoniac, in a warmed mortar, with 900 Cc. (or 29 fluidounces) of Water, at first gradually added, until a uniform emulsion results. Then strain the mixture into a graduated vessel, and wash the mortar and strainer with enough Water to make the product measure 1000 Cc. (or 32 fluidounces).

EXTRACTA.

Extracts.—Solid Extracts.

With the object of avoiding the repeated description of identical methods of manipulation directed in the formulas for Solid Extracts, a general process is given below, which will be referred to in the several formulas, with such special directions as may be needed. In the case of formulas in which two menstrua of different strengths or composition are directed, the menstruum to be first used will be designated as *Menstruum I*, and that to be used subsequently as *Menstruum II*; this expedient being similar to that described under *Fluidextracts* (*N. F.*), on p. 56 and 57.

General Process for Preparing Solid Extracts.

Moisten 1000 Gm. (or 32 troy ounces) of the drug, with the prescribed quantity of menstruum, of the composition designated in the formula, introduce the moistened drug into a percolator prepared for percolation, and allow it to stand, well covered, for several hours. Then pack the drug moderately firm, firm, or very firm, as may be directed, pour on menstruum to saturate the powder and leave a stratum above it, and when the liquid begins to drop from the lower orifice, close it, closely cover the percolator, and macerate the contents for 48 hours. Then allow the percolation to proceed slowly, first pouring on *Menstruum I* and, after this is consumed *Menstruum II*, if two different menstrua are directed, until 3000 Cc. (or 96 fluidounces) of percolate are obtained, or until the drug is exhausted. Reserve the first 900 Cc. (or 29 fluidounces) of the percolate, evaporate the remainder, in a porcelain or enameled dish, at a temperature not exceeding 50° C. (122°F.) to 100

Cc. (or 3 fluidounces), add the reserved portion, and evaporate at or below the above-mentioned temperature, until an extract of the required consistence (usually designated as "pilular") remains.

EXTRACTUM ACONITI.

Extract of Aconite.

Extract of Aconite Root.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Aconite Root, in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum: Alcohol.

Moisten the powder with 400 Cc. (or 32 fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM ARNICÆ RADICIS.

Extract of Arnica Root.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Arnica Root, in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum: Diluted Alcohol.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM CINCHONÆ.

Extract of Cinchona.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Cinchona, in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum I: Alcohol, 3000 Cc. (or 96 fluidounces).
Water, 1000 Cc. (or 32 fluidounces).

Menstruum II: Diluted Alcohol.

Moisten the powder with 350 Cc. (or 11 fluidounces) of *Menstruum I*, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly—but obtaining 4000 Cc. (or 128 fluidounces) of total percolate instead of 3000 Cc. (or 96 fluidounces) directed in the general process*—and obtaining an extract of pilular consistence.

EXTRACTUM CONII.

Extract of Conium.

Extract of Hemlock.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Conium (fruit), in No. 40 powder	1000 Gm.	32 troy ounces.

Menstruum I: Acetic Acid, 20 Cc. (or 300 minims).
Diluted Alcohol, 980 Cc. (or 31¼ fluidounces).

Menstruum II: Diluted Alcohol.

Moisten the powder with 300 Cc. (or 9½ fluidounces) of *Menstruum I*, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM IRIDIS.

Extract of Iris.

Extract of Blue Flag.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Iris (Blue Flag), in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum: Alcohol.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM JALAPÆ.

Extract of Jalap.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Jalap, in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum: Alcohol.

Moisten the drug with 350 Cc. (or 11 fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM JUGLANDIS.

Extract of Juglans.

Extract of Butternut.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Juglans (Butternut), in No. 30 powder . . .	1000 Gm.	32 troy ounces.

Menstruum: Diluted Alcohol.

Moisten the product with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM PODOPHYLLI.

Extract of Podophyllum.

[Extract of Mayapple.]

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Podophyllum, in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum: Alcohol, 8 volumes.
Water, 2 volumes.

Moisten the powder with 300 Cc. (or 9½ fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM STRAMONII SEMINIS.

Extract of Stramonium Seed.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Stramonium Seed, in No. 60 powder	1000 Gm.	32 troy ounces.

Menstruum: Diluted Alcohol.

Moisten the powder with 300 Cc. (or 9½ fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

EXTRACTUM UVÆ URSI.

Extract of Uva Ursi.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Uva Ursi, in No. 30 powder	1000 Gm.	32 troy ounces.

Menstruum : Alcohol, 2 volumes.
Water, 5 volumes.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under the General Process (N. F. "Appendix," p. 208); packing the drug *firmly*, and obtaining an extract of pilular consistence.

FERRI IODIDUM SACCHARATUM.

Saccharated Ferrous Iodide.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Iron, in the form of fine, bright wire, and cut into small pieces	6 Gm.	90 grains.
Reduced Iron	1 Gm.	15 grains.
Iodine	17 Gm.	255 grains.
Distilled Water,		
Sugar of Milk, recently dried, of each a sufficient quantity		
To make	100 Gm.	1500 grains.

Mix the Iron, Iodine, and 20 Cc. (or 5 fluidrachms) of Distilled Water in a flask of thin glass, shake the mixture occasionally, until the reaction ceases, and the solution has acquired a green color and lost the smell of Iodine; then filter it through a small wetted filter into a porcelain capsule containing 40 Gm. (or 600 grains) of Sugar of Milk. Rinse the flask and Iron Wire with a little Distilled Water, pass the rinsings through the filter into the capsule, and evaporate on a water-bath, with frequent stirring, until a dry mass remains. Transfer this quickly to a heated iron mortar, reduce it to powder, and mix it intimately, by trituration, with the Reduced Iron and enough Sugar of Milk to make the final product weigh 100 Gm. (or 1500 grains).

Transfer the powder at once to small and perfectly dry bottles, which should be securely stoppered, and kept in a cool and dark place.

Note.—This preparation contains about 20 per cent. of Ferrous Iodide.

FLUIDEXTRACTA.

Extracta Fluida.

Fluid Extracts.

(U. S. P. 1890.)

With the adoption of the title "Fluidextracta" for "Extracta Fluida" in the U. S. P. VIII (1900), this change in title has also been adopted for the fluidextracts dismissed from the Pharmacopœia. As in the case of "Extracta" (N. F. "Appendix"), the formulas for the obsolete fluidextracts have been condensed, so as to avoid the repeated description of identical methods of manipulation, but in conformity with the *General Processes* described under "Fluidextracta," N. F., p. 56 to 58, and such special directions as may be needed.

FLUIDEXTRACTUM ARNICÆ RADICIS.

Extractum Arnicæ Radicis Fluidum.

Fluidextract of Arnica Root.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Arnica Root, in No. 60 powder	1000 Gm.	30½ troy ounces.

Menstruum : Alcohol, 3 volumes.
Water, 1 volume.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM ASCLEPIADIS.

Extractum Asclepiadis Fluidum.

Fluidextract of Asclepias.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Asclepias (Pleurisy Root), in No. 60 powder .	1000 Gm.	30½ troy ounces.

Menstruum : Diluted Alcohol.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM ASPIDOSPERMATIS.

Extractum Aspidospermatis Fluidum.

Fluidextract of Quebracho.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Aspidosperma (Quebracho), in No. 60 powder,	1000 Gm.	30½ troy ounces.

Menstruum I: Alcohol, 600 Cc. (or 19¼ fluidounces).
Glycerin, 100 Cc. (or 3¼ fluidounces).
Water, 300 Cc. (or 9½ fluidounces).

Menstruum II: Alcohol, 2 volumes.
Water, 1 volume.

Moisten the powder with 400 Cc. (or 13 fluidounces) of *Menstruum I*, and proceed as directed under *Process B* (N. F., p. 57), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM CASTANEÆ.

Extractum Castaneæ Fluidum.

Fluidextract of Chestnut Leaves.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Castanea (Chestnut Leaves), in No. 30 powder,	1000 Gm.	30½ troy ounces.
Glycerin	100 Cc.	3¼ fluidounces.
Alcohol,		
Water, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Pour 5000 Cc. (or 160 fluidounces) of boiling Water upon the powder, allow it to macerate two hours, then express the liquid, transfer the residue to a percolator, and pour Water upon it until the powder is exhausted. Evaporate the united liquids, on a water-bath, to 2000 Cc. (or '64 fluidounces), allow to cool, and add 600 Cc. (or 19¼ fluidounces) of Alcohol. When the insoluble matter has subsided, separate the clear liquid, filter the remainder, evaporate the united liquids to 700 Cc. (or 22⅜ fluidounces), allow to cool, add the Glycerin, and, lastly, enough Alcohol to make the Fluidextract measure 1000 Cc. (or 32 fluidounces).

FLUIDEXTRACTUM COLCHICI RADICIS.

Extractum Colchici Radicis Fluidum.

Fluidextract of Colchicum Root.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Colchicum Root, in No. 60 powder	1000 Gm.	30½ troy ounces.

Menstruum: Alcohol, 2 volumes.
Water, 1 volume.

Moisten the powder with 350 Cc. (or 11 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM CUSSO.

Extractum Cusso Fluidum.

Fluidextract of Kousso.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Kousso (Brayera), in No. 40 powder	1000 Gm.	30½ troy ounces.

Menstruum : Alcohol.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM DULCAMARÆ.

Extractum Dulcamaræ Fluidum.

Fluidextract of Bittersweet.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Dulcamara (Bittersweet), in No. 60 powder .	1000 Gm.	30½ troy ounces.

Menstruum : Diluted Alcohol.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM GOSSYPII RADICIS.

Extractum Gossypii Radicis Fluidum.

Fluidextract of Cotton Root Bark.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Cotton Root Bark, in No. 30 powder	1000 Gm.	30½ troy ounces.

Menstruum I : Alcohol, 750 Cc. (or 24 fluidounces).
Glycerin, 250 Cc. (or 8 fluidounces).

Menstruum II : Alcohol.

Moisten the powder with 500 Cc. (or 16 fluidounces) of *Menstruum I*, and proceed as directed under *Process B* (N. F., p. 57), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM IRIDIS.

Extractum Iridis Fluidum.

Fluidextract of Blue Flag.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Iris (Blue Flag), in No. 60 powder	1000 Gm.	30½ troy ounces.

Menstruum : Alcohol.

Moisten the powder with 400 Cc. (or 13 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM MENISPERMI.

Extractum Menispermi Fluidum.

Fluidextract of Menispermum.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Menispermum (Yellow Parilla), in No. 60 powder	1000 Gm.	30½ troy ounces.

Menstruum : Alcohol, 3 volumes.
Water, 1 volume.

Moisten the powder with 300 Cc. (or 9½ fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces).

FLUIDEXTRACTUM RUMICIS.

Extractum Rumicis Fluidum.

Fluidextract of Rumex.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Rumex, in No. 40 powder	1000 Gm.	30½ troy ounces.

Menstruum : Diluted Alcohol.

Moisten the powder with 350 Cc. (or 11 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM SCOPARII.

Extractum Scoparii Fluidum.

Fluidextract of Broom.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Scoparius (Broom), in No. 60 powder	1000 Gm.	30½ troy ounces.

Menstruum : Diluted Alcohol.

Moisten the powder with 350 Cc. (or 11 fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

FLUIDEXTRACTUM STRAMONII SEMINIS.

Extractum Stramonii Seminis Fluidum.

Fluidextract of Stramonium Seed.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Stramonium Seed, in No. 60 powder	1000 Gm.	30½ troy ounces

Menstruum: Alcohol, 3 volumes.
Water, 1 volume.

Moisten the powder with 200 Cc. (or 6½ fluidounces) of the menstruum, and proceed as directed under *Process A* (N. F., p. 56), to make 1000 Cc. (or 32 fluidounces) of Fluidextract.

GLYCERITUM VITELLI.

Glycerite of Yolk of Egg.

"Glyconin."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Fresh Yolk of Egg	45 Gm.	675 grains.
Glycerin	55 Gm.	825 grains.
To make	100 Cc.	1500 grains.

Rub the Yolk of Egg in a mortar, with the Glycerin, gradually added, until they are thoroughly mixed.

HYDRARGYRI SUBSULPHAS FLAVUS.

Yellow Mercuric Subsulphate.

"Turpeth Mineral."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Mercury	100 Gm.	3 troy ounces.
Sulphuric Acid	30 Cc.	440 minims.
Nitric Acid	25 Cc.	365 minims.
Distilled Water, a sufficient quantity		

Upon the Mercury, contained in a capacious flask, pour the Sulphuric Acid, previously mixed with 15 Cc. (or ½ fluidounce) of Distilled Water; then add, very gradually, the Nitric Acid, previously mixed with 25 Cc. (or 6 fluidrachms) of Distilled Water, and digest at a gentle heat until reddish fumes are no longer given off. Transfer the

mixture to a porcelain capsule, and heat it on a sand-bath, under a hood or in the open air, with frequent stirring, until a dry, white mass remains. Reduce this to a fine powder, and add it in small portions at a time, with constant stirring, to 2000 Cc. (or 64 fluidounces) of boiling Distilled Water. When all has been added, continue the boiling for ten minutes; then allow the mixture to settle, decant the supernatant liquid, transfer the precipitate to a strainer, wash it with warm Distilled Water, until the washings no longer have an acid reaction, and dry it in a moderately warm place. Keep the product in well-stoppered bottles, protected from light.

INFUSUM BRAYERÆ.

Infusion of Brayera.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Brayera, in No. 20 powder	60 Gm.	2 troy ounces.
Boiling Water	1000 Cc.	32 fluidounces.

Pour the Boiling Water upon the Brayera, and let it macerate in a covered vessel until cool.

This Infusion should be dispensed without straining.

INFUSUM CINCHONÆ.

Infusion of Cinchona.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Cinchona, in No. 40 powder	60 Gm.	870 grains.
Aromatic Sulphuric Acid	10 Cc.	155 minims.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Acid with 500 Cc. (or 16 fluidounces) of Water, and moisten the powder with 30 Cc. (or 1 fluidounce) of the mixture; pack it firmly in a conical glass percolator, and gradually pour upon it, first the remainder of the mixture, and afterwards Water, until the Infusion measures 1000 Cc. (or 32 fluidounces).

LINIMENTUM CANTHARIDIS.

Cantharides Liniment.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Cantharides, in No. 60 powder	150 Gm.	4½ troy ounces.
Oil of Turpentine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Digest the Cantharides with 1000 Cc. (or 32 fluidounces) of Oil of Turpentine, in a closed vessel, by means of a water-bath for three hours; then strain and add enough Oil of Turpentine through the strainer to make the Liniment measure 1000 Cc. (or 32 fluidounces).

LINIMENTUM PLUMBI SUBACETATIS.

Liniment of Lead Subacetate.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Solution of Lead Subacetate	350 Cc.	11 fluidounces.
Cotton Seed Oil	650 Cc.	21 fluidounces.

Mix them.

LINIMENTUM SINAPIS COMPOSITUM.

Compound Liniment of Mustard.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Volatile Oil of Mustard	30 Cc.	450 minims.
Fluidextract of Mezereum	200 Cc.	6½ fluidounces.
Camphor	60 Gm.	870 grains.
Castor Oil	150 Cc.	4¾ fluidounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Dissolve the Camphor in 500 Cc. (or 16 fluidounces) of Alcohol, and add the Fluidextract of Mezereum; then add the Oil of Mustard and the Castor Oil, and, finally, enough Alcohol to make the product measure 1000 Cc. (or 32 fluidounces). Mix thoroughly.

LIQUOR FERRI ACETATIS.

Solution of Ferric Acetate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Solution of Ferric Sulphate (U. S. P. VIII)	800 Gm.	25¾ troy ounces.
Glacial Acetic Acid	260 Gm.	8¼ troy ounces.
Ammonia Water	850 Cc.	28¾ fluidounces.
Water,		
Distilled Water, each, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Mix the Ammonia Water with 3000 Cc. (or 96 fluidounces) of cold Water, and the Solution of Ferric Sulphate with 10,000 Cc. (or 320 fluidounces) of cold Water. Add the latter solution slowly to the di-

luted Ammonia Water, stirring constantly. Let the mixture stand until the precipitate has subsided as far as practicable, and then decant the supernatant liquid. Add to the preciptate 6000 Cc. (or 192 fluidounces) of boiling Water, mix well, and again set the mixture aside, as before. Repeat the washing with successive portions of boiling Water, in the same manner, until the washings are no longer affected by sodium cobaltic nitrite test solution (showing the removal of ammonia and its salts). Transfer the mixture to a wet muslin strainer, allow the precipitate to drain completely, and press it, folded in the strainer, until its weight is reduced to 700 Gm. (or 22 troy ounces) or less. Now add the precipitate gradually to the Glacial Acetic Acid contained in a tared jar provided with a glass stopper, stirring the mixture after each addition until each portion added is nearly dissolved before adding another portion. Finally, add enough Distilled Water to make the product weigh 1000 Gm. (or 32 troy ounces), allow it to become clear by subsidence, and decant the clear solution. Keep the product in well-stoppered bottles, in a cool place, protected from light.

Note.—This solution contains about 31 per cent. of anhydrous Ferric Acetate ($Fe_2(C_2H_3O_2)_6$), corresponding to about 7.5 per cent. metallic iron.

LIQUOR FERRI CITRATIS.

Solution of Ferric Citrate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Solution of Ferric Sulphate (U. S. P. VIII) .	840 Gm.	27 troy ounces.
Citric Acid	300 Gm.	9½ troy ounces.
Ammonia Water	880 Cc.	30 fluidounces.
Water, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Mix the Ammonia Water with 3000 Cc. (or 96 fluidounces) of cold Water, and the Solution of Ferric Sulphate with 10,000 Cc. (or 320 fluidounces) of cold Water. Add the latter solution slowly to the diluted Ammonia Water, stirring constantly. Pour the mixture over a wet muslin strainer, and allow the liquid to run off and the precipitate to drain. Then remove the moist mass from the strainer, mix it well with 6000 Cc. (or 192 fluidounces) of cold Water, again pour it on the strainer, and let it drain. Repeat this washing with several successive portions of cold Water in the same manner, until the washings cease to produce more than a faint cloudiness with barium chloride test solution. Then allow the precipitate to drain completely, transfer it to a porcelain capsule, add the Citric Acid, and heat the mixture, on a water-bath, to 60° C. (140° F.), stirring constantly, until the precipitate

is dissolved. Lastly, filter the liquid, and evaporate it, at the above-mentioned temperature, until it weighs 1000 Gm. (or 32 troy ounces).

Note.—This solution contains about 35.5 per cent. of anhydrous Ferric Citrate ($Fe_2(C_6H_5O_7)_2.6H_2O$), corresponding to about 7.5 per cent. of metallic iron.

LIQUOR FERRI NITRATIS.

Solution of Ferric Nitrate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Solution of Ferric Sulphate (U. S. P. VIII) .	145 Gm.	4¾ troy ounces.
Ammonia Water	160 Cc.	5⅜ fluidounces.
Nitric Acid	71 Gm.	2¼ troy ounces.
Distilled Water, Water, each, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Mix the Ammonia Water with 500 Cc. (or 16 fluidounces) of cold Water, and the Solution of Ferric Sulphate with 1500 Cc. (or 48 fluidounces) of cold Water. Add the latter solution to the diluted Ammonia Water, stirring constantly. Let the mixture stand until the precipitate has subsided as far as practicable, and then decant the supernatant liquid. Add to the precipitate 1000 Cc. (or 32 fluidounces) of cold Water, mix well, and again set the mixture aside as before. Repeat the washings with successive portions of cold Water, in the same manner, until the washings produce but a slight cloudiness with barium chloride test solution. Pour the washed ferric hydroxide on a wet muslin strainer, and let it drain thoroughly. Then transfer it to a porcelain capsule, add the Nitric Acid, and stir with a glass rod, until a clear solution is obtained. Finally, add enough Distilled Water to make the finished product weigh 1000 Gm. (or 32 troy ounces). Filter, if necessary.

Note.—This solution contains about 6.2 per cent. of Ferric Nitrate ($Fe_2(NO_3)_6$), corresponding to about 1.4 per cent. of metallic iron.

LIQUOR GUTTA-PERCHÆ.

Solution of Gutta-Percha.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Gutta-Percha, in thin slices	15 Gm.	230 grains.
Commercial Chloroform	100 Cc.	3½ fluidounces.
Lead Carbonate, in fine powder	17 Gm.	260 grains.

Add the Gutta-Percha to 75 Cc. (or 2½ fluidounces) of the Chloroform, contained in a bottle, cork it well, and shake it occasionally until

the Gutta-Percha is dissolved. Then add the Lead Carbonate, previously mixed with the remainder of the Chloroform, and having several times shaken the whole together, at intervals of half an hour, set the mixture aside until the insoluble matters have subsided and the solution has become perfectly clear. Lastly, decant the liquid and preserve it in small, cork-stoppered vials.

MAGNESII CITRAS EFFERVESCENS.

Effervescent Magnesium Citrate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Magnesium Carbonate	10 Gm.	150 grains.
Citric Acid	46 Gm.	690 grains.
Sodium Bicarbonate	34 Gm.	510 grains.
Sugar, in fine powder	8 Gm.	120 grains.
Alcohol,		
Distilled Water, each, a sufficient quantity.		

Mix the Magnesium Carbonate with 30 Gm. (or 450 grains) of Citric Acid and 4 Cc. (or 1 fluidrachm) of Distilled Water, so as to form a thick paste. Dry this at a temperature not exceeding 30° C. (86° F.), and reduce it to a fine powder. Then mix it thoroughly with the Sugar, the Sodium Bicarbonate, and the remainder of the Citric Acid previously reduced to a very fine powder. Dampen the powder with a sufficient quantity of Alcohol, so as to form a mass, and rub it through a No. 6 tinned-iron sieve. Then dry it, and reduce it to a coarse, granular powder.

Keep the product in well-closed vessels.

MASSA COPAIBÆ.

Mass of Copaiba.

"Solidified Copaiba."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Copaiba	94 Gm.	1410 grains.
Magnesia	6 Gm.	90 grains.
Water, a sufficient quantity.		

Triturate the Magnesia with a little Water, in a capsule, until the powder is uniformly dampened throughout. Then gradually incorporate with it the Copaiba, so that a uniform mixture may result, place the capsule on a water-bath, and heat during half an hour, frequently stirring. Lastly, transfer the mixture to a suitable vessel, and set it aside until the mass has acquired a pilular consistence.

MISTURA MAGNESIÆ ET ASAFŒTIDÆ.

Mixture of Magnesia and Asafetida.

"Dewees' Carminative."

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Magnesium Carbonate	50 Gm.	1½ troy ounces.
Tincture of Asafetida	75 Cc.	19 fluidrachms.
Tincture of Opium	10 Cc.	155 minims.
Sugar	100 Gm.	3 troy ounces.
Distilled Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Rub the Magnesium Carbonate and Sugar, in a mortar, with the Tincture of Asafetida and the Tincture of Opium. Then gradually add enough Distilled Water to make the mixture measure 1000 Cc. (or 32 fluidounces).

MUCILAGO CYDONII.

Mucilage of Cydonium.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Cydonium	2 Gm.	30 grains.
Distilled Water	100 Cc.	3 fluidounces.

Macerate the Cydonium for half an hour, in a covered vessel, with the Distilled Water, frequently agitating. Then drain the liquid through muslin without pressure.

This preparation should be freshly made, when required for use.

OLEATUM ZINCI.

Oleate of Zinc.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Zinc Oxide	50 Gm.	1½ troy ounces.
Oleic Acid	950 Gm.	28½ troy ounces.
To make	1000 Gm.	30 troy ounces.

Introduce the Oleic Acid into a capacious capsule, and gradually add to it the Zinc Oxide by sifting it upon the surface of the Acid, and incorporate it by continuous stirring. Set the mixture aside for a few hours, and then heat it on a water-bath, frequently stirring, until the Oxide is dissolved.

Note.—This preparation must not be confused with the Oleate of Zinc produced

by the N. F. formula (see p. 116), which is a fine-powdery form, whereas that obtained by the above formula is a solid mass.

OLEUM PHOSPHORATUM.

Phosphorated Oil.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Phosphorus	1 Gm.	15 grains.
Expressed Oil of Almond, Ether, each, a sufficient quantity		
To make	100 Gm.	1500 grains.

Introduce a *sufficient quantity* of Expressed Oil of Almond into a flask, heat it on a sand-bath to 250° C. (482° F.), and keep it at that temperature for fifteen minutes. Then allow it to cool, and filter it. Put 90 Gm. (or 1350 grains) of the filtered Oil together with the Phosphorus, previously well dried by filtering paper, into a dry, tared bottle capable of holding about 120 Cc. (or 4 fluidounces), insert the stopper, and heat the bottle in a water-bath until the Phosphorus melts. Then agitate it until the Phosphorus is dissolved, allow it to cool, add enough Ether to make the mixture weigh 100 Gm. (or 1500 grains), and agitate it again. Lastly, transfer the solution to small glass-stoppered vials, which should be completely filled and kept in a cool, dark place.

Note.—This preparation must be free from any particles of undissolved phosphorus.

PEPSINUM SACCHARATUM.

Saccharated Pepsin.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Pepsin	10 Gm.	150 grains.
Sugar of Milk, recently dried, and in No. 30 powder	90 Gm.	1350 grains.
To make	100 Gm.	1500 grains.

Triturate the Pepsin with the Sugar of Milk to a fine, uniform powder.

Keep the product in well-stoppered bottles.

Note.—Saccharated Pepsin, when tested by the Assay Process of the U. S. P. VIII (1900), should digest 300 times its own weight of freshly coagulated and disintegrated egg albumen.

PILULÆ ALOES ET ASAFOETIDÆ.

Pills of Aloes and Asafetida.

(U. S. P. 1890.)

	Metric. 100 *pills contain*	*Apothecaries'* 1 *pill contains*
Purified Aloes	9 Gm.	$1\frac{1}{3}$ grains.
Asafetida	9 Gm.	$1\frac{1}{3}$ grains.
Soap	9 Gm.	$1\frac{1}{3}$ grains.

Water, a sufficient quantity.

PILULÆ ANTIMONII COMPOSITÆ.

Compound Pills of Antimony.

"Plummer's Pills."

(U. S. P. 1890.)

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Sulphurated Antimony	4 Gm.	$\frac{3}{5}$ grain.
Mild Mercurous Chloride	4 Gm.	$\frac{3}{5}$ grain.
Guaiac, in fine powder	8 Gm.	$1\frac{1}{5}$ grains.

Castor Oil, a sufficient quantity.

PILULÆ FERRI COMPOSITÆ.

Compound Pills of Iron.

(U. S. P. 1880.)

	Metric 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Myrrh	9.75 Gm.	$1\frac{1}{2}$ grains.
Sodium Carbonate	4.85 Gm.	$\frac{3}{4}$ grain.
Sulphate of Iron	4.85 Gm.	$\frac{3}{4}$ grain.

Syrup, a sufficient quantity.

PILULÆ GALBANI COMPOSITÆ.

Compound Pills of Galbanum.

(U. S. P. 1880.)

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Galbanum	9.75 Gm.	$1\frac{1}{2}$ grains.
Myrrh	9.75 Gm.	$1\frac{1}{2}$ grains.
Asafetida	3.25 Gm.	$\frac{1}{2}$ grain.

Syrup, a sufficient quantity.

PILULÆ RHEI.

Pills of Rhubarb.

(U. S. P. 1890.)

	Metric. 100 *pills contain*	*Apothecaries'.* 1 *pill contains*
Rhubarb, in No. 60 powder	20 Gm.	3¼ grains.
Soap, in fine powder	6 Gm.	1 grain.
Water, a sufficient quantity.		

POTASSA CUM CALCE.

Potassa with Lime.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Potassa	500 Gm.	16 troy ounces.
Lime	500 Gm.	16 troy ounces.
To make	1000 Gm.	32 troy ounces.

Rub them together, in a warm mortar, so as to form a powder, and keep it in a well-stoppered bottle.

POTASSA SULPHURATA.

Sulphurated Potassa.

"Liver of Sulphur."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Sublimed Sulphur	100 Gm.	3 troy ounces.
Potassium Carbonate, dried	200 Gm.	6 troy ounces.

Mix the powdered and dried Potassium Carbonate thoroughly with the Sublimed Sulphur, and gradually heat the mixture, in a covered crucible, which should be only about half filled with it, until the mass ceases to foam and is in a state of perfect fusion. Then pour the fused mass on a cold marble slab, and, after it has cooled, break it into pieces, and keep it in a well-stoppered bottle.

PULVIS ANTIMONIALIS.

Antimonial Powder.

"James' Powder."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Antimony Oxide	33 Gm.	1 troy ounce.
Precipitated Calcium Phosphate	67 Gm.	2 troy ounces.
To make	100 Gm.	3 troy ounces.

Mix them intimately.

SODII CARBONAS EXSICCATUS.

Dried Sodium Carbonate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'*
Sodium Carbonate ($Na_2CO_2+10H_2O$)	200 Gm.	6 troy ounces.
To make	100 Gm.	3 troy ounces.

Break the crystals into small fragments, and allow them to effloresce for several days in warm air, at a temperature not exceeding 25° C. (77° F.), until they are completely disintegrated; then dry the white powder at a temperature of about 45° C. (113° F.), until its weight is reduced to 100 Gm. (or 3 troy ounces). Pass the powder through a sieve, and preserve it in well-stoppered bottles.

SPIRITUS AURANTII.

Spirit of Orange.

U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Oil of Orange Peel	50 Cc.	1½ fluidounces.
Deodorized Alcohol	950 Cc.	28½ fluidounces.
To make	1000 Cc.	30 fluidounces.

Mix them.

SPIRITUS LIMONIS.

Spirit of Lemon.

"Essence of Lemon."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Oil of Lemon	50 Cc.	1½ fluidounces.
Lemon Peel, freshly grated	50 Gm.	1½ troy ounces.
Deodorized Alcohol, a sufficient quantity		
To make	1000 Cc.	30 fluidounces.

Dissolve the Oil of Lemon in 900 Cc. (or 27 fluidounces) of Deodorized Alcohol, add the Lemon Peel, and macerate for twenty-four hours. Then filter through paper, and add, through the filter, enough Deodorized Alcohol to make the Spirit measure 1000 Cc. (or 30 fluidounces.)

SPIRITUS MYRCIÆ.

Spirit of Myrcia.

"Bay Rum."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Oil of Myrcia	16 Cc.	½ fluidounce.
Oil of Orange Peel	1 Cc.	15 minims.
Oil of Pimenta	1 Cc.	15 minims.
Alcohol	1220 Cc.	39 fluidounces.
Water, a sufficient quantity		
To make	2000 Cc.	64 fluidounces.

Mix the Oils with the Alcohol, and gradually add Water until the solution measures 2000 Cc. (or 64 fluidounces). Set the mixture aside, in a well-stoppered bottle, for eight days, then filter it through paper, in a well-covered funnel.

SPIRITUS MYRISTICÆ.

Spirit of Nutmeg.

"Essence of Nutmeg."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Oil of Nutmeg	50 Cc.	1½ fluidounces.
Alcohol	950 Cc.	28½ fluidounces.
To make	1000 Cc.	30 fluidounces.

Mix them.

SPIRITUS ODORATUS.

Perfumed Spirit.

"Cologne Water."

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Oil of Bergamot	15 Cc.	230 minims.
Oil of Lemon	8 Cc.	125 minims.
Oil of Rosemary	7 Cc.	110 minims.
Oil of Lavender Flowers	4 Cc.	62 minims.
Oil of Orange Flowers	4 Cc.	62 minims.
Acetic Ether	2 Cc.	31 minims.
Water	120 Cc.	4 fluidounces.
Alcohol	840 Cc.	27 fluidounces.

Dissolve the Oils and the Acetic Ether in the Alcohol, and add the Water. Set the Mixture aside, in a well-closed bottle, for eight days, then filter through paper, in a well-covered funnel.

SYRUPUS ALLII.

Syrup of Garlic.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Fresh Garlic, sliced and bruised	200 Gm.	6 troy ounces.
Sugar	800 Gm.	24 troy ounces.
Diluted Acetic Acid, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Macerate the Garlic in 300 Cc. (or 9 fluidounces) of Diluted Acetic Acid during four days, and express the liquid, avoiding the use of metallic utensils. Then mix the residue with 200 Cc. (or 6 fluidounces) more of Diluted Acetic Acid, and again express. Mix the expressed liquids, and filter. Pour the filtrate upon the Sugar, contained in a suitable vessel, and stir or agitate until the Sugar is dissolved. Lastly, add enough Diluted Acetic Acid to make the product measure 1000 Cc. (or 32 fluidounces), and mix thoroughly.

Note.—The Sugar may also be dissolved in the filtrate by cold percolation.

SYRUPUS ALTHÆÆ.

Syrup of Althæa.

"Syrup of Marshmallow."

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Althæa (root), cut in small pieces	50 Gm.	1½ troy ounces.
Alcohol	30 Cc.	1 fluidounce.
Glycerin	100 Cc.	3 fluidounces.
Sugar	700 Gm.	21 troy ounces.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Wash the Althæa with cold Water, then macerate it with 400 Cc. (or 12 fluidounces) of Water previously mixed with the Alcohol, during one hour, stirring frequently, and strain without expressing the residue. In the strained liquid dissolve the Sugar by agitation, without heat, add the Glycerin, and enough Water to make the product measure 1000 Cc. (or 32 fluidounces). Mix thoroughly.

Keep the Syrup in well-stoppered, completely filled bottles, in a cool place.

SYRUPUS FERRI BROMIDI.

Syrup of Bromide of Iron.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Iron, in the form of fine wire, and cut into small pieces	30 Gm.	456 grains.
Bromine	75 Gm.	1140 grains.
Sugar, in coarse powder	600 Gm.	19 troy ounces.
Distilled Water, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Introduce the Iron into a flask of thin glass of suitable capacity, add to it 200 Cc. (or 6½ fluidounces) of Distilled Water and afterwards the Bromine. Shake the mixture occasionally, until the reaction ceases and the solution has acquired a green color and has lost the odor of Bromine. Place the Sugar in a porcelain capsule and filter the Solution of Bromide of Iron into the Sugar. Rinse the flask and Iron wire with 90 Cc. (or 3 fluidounces) of Distilled Water and pass the washings through the filter into the Sugar. Stir the mixture with a porcelain or wooden spatula, heat it to the boiling point on a sand-bath, and having strained the Syrup through linen into a tared bottle, add enough Distilled Water to make the product weigh 1000 Gm. (or 32 troy ounces). Lastly, shake the bottle and transfer its contents to small vials, which should be completely filled, securely corked, and kept in a place accessible to daylight.

Note.—Syrup of Bromide of Iron contains 10 per cent. of Ferrous Bromide ($FeBr_2$).

SYRUPUS HYPOPHOSPHITUM.

Syrup of Hypophosphites.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Calcium Hypophosphite	45 Gm.	660 grains.
Potassium Hypophosphite	15 Gm.	220 grains.
Sodium Hypophosphite	15 Gm.	220 grains.
Diluted Hypophosphorous Acid	2 Gm.	30 grains.
Sugar	500 Gm.	15 troy ounces.
Spirit of Lemon	5 Cc.	75 minims.
Water, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Triturate the Hypophosphites with 450 Cc. (or 14½ fluidounces) of Water, until they are dissolved, add the Spirit of Lemon, and the Hypophosphorous Acid, and filter the liquid. In the filtrate dissolve the Sugar by agitation, without heat, and add enough Water, through

the filter, to make the product measure 1000 Cc. (or 32 fluidounces). Strain, if necessary.

Note.—The Sugar may also be dissolved in the filtrate by cold percolation.

SYRUPUS RUBI IDÆI.

Syrup of Raspberry.

(U. S. P. 1890.)

Fresh, Ripe Raspberries, any convenient quantity.
Sugar, a sufficient quantity.

Reduce the Raspberries to a pulp, and let this stand, at a temperature of about 20° C. (68° F), until a small portion of the filtered juice mixes clear with half its volume of alcohol. Then separate the juice by pressing, set it aside, in a cool place, until the liquid portion has become clear, and filter. To every forty (40) parts by weight of the filtrate (which should not be allowed to remain, unprotected by sugar, more than two hours) add sixty (60) parts of Sugar, heat the mixture to boiling, avoiding the use of tinned vessels, and strain. Keep the product in well-stoppered bottles, in a cool and dark place.

TINCTURA ARNICÆ RADICIS.

Tincture of Arnica Root.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Arnica Root, in No. 40 powder	100 Gm.	3 troy ounces.
Alcohol,		
Water, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix Alcohol and Water in the proportion of 65 *volumes* of Alcohol and 35 *volumes* of Water. Moisten the powder with 150 Cc. (or 4½ fluidounces) of the menstruum, and macerate for twenty-four hours; then pack it moderately in a cylindrical percolator, and gradually pour menstruum upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA BRYONIÆ.

Tincture of Bryonia.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Bryonia, recently dried, and in No. 40 powder,	100 Gm.	3 troy ounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the powder with 100 Cc. (or 3 fluidounces) of Alcohol and

macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA CHIRATÆ.

Tincture of Chirata.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Chirata, in No. 40 powder	100 Gm.	3 troy ounces.
Alcohol,		
Water, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix Alcohol and Water in the proportion of 65 *volumes* of Alcohol and 35 *volumes* of Water. Having moistened the powder with 100 Cc. (or 3 fluidounces) of the menstruum, macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour menstruum upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA CONII.

Tincture of Conium.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Conium (fruit), in No. 30 powder	150 Gm.	4¾ troy ounces.
Diluted Hydrochloric Acid	4 Gm.	60 grains.
Diluted Alcohol, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Moisten the powder with 50 Cc. (or 1½ fluidounces) of Diluted Alcohol, previously mixed with the Diluted Hydrochloric Acid, and macerate for twenty-four hours; then pack it moderately in a conical glass percolator, and gradually pour Diluted Alcohol upon it until 1000 Gm. (or 32 troy ounces) of Tincture are obtained.

TINCTURA CROCI.

Tincture of Saffron.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Saffron	100 Gm.	3 troy ounces.
Diluted Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the Saffron with 100 Cc. (or 3 fluidounces) of Diluted Alco-

hol, and macerate it for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour Diluted Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA CUBEBÆ.

Tincture of Cubeb.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Cubeb, in No. 30 powder	200 Gm.	6 troy ounces.
Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the powder with 100 Cc. (or 3 fluidounces) of Alcohol, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA HUMULI.

Tincture of Hops.

(U. S. P. 1890).

	Metric.	*Apothecaries'.*
Hops, well dried and in No. 40 powder . . .	200 Gm.	6 troy ounces.
Diluted Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the powder with 400 Cc. (or 12 fluidounces) of Diluted Alcohol, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator and gradually pour Diluted Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA IGNATIÆ.

Tincture of Ignatia.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Ignatia, in No. 60 powder	100 Gm.	3 troy ounces.
Alcohol,		
Water, of each, a sufficient quantity.		

Mix Alcohol and Water in the proportion of *eight parts* by weight of Alcohol to *one part* of Water. Moisten the Powder with 100 Gm. (or 3 troy ounces) of the menstruum, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour menstruum upon it, until the Ignatia is exhausted. Reserve the first 900

Gm. (or 29 troy ounces), evaporate the remainder to 100 Gm. (or 3 troy ounces), and mix with the reserved portion. Of this tincture, take any convenient number of parts, and, by means of a water-bath, evaporate it to dryness. Weigh the resulting extract, and from its weight calculate the quantity of extract contained in the 1000 Gm. (or 32 troy ounces) of Tincture obtained; then dissolve the dried extract in the remainder of the Tincture, and add enough of the above menstruum to make the product weigh so many parts that each *one hundred parts* of Tincture shall contain *one part* of dry extract. Lastly, mix thoroughly, and filter through paper.

Tincture of Ignatia thus prepared represents about 10 Gm. (or 150 grains) of Ignatia in 100 Gm. (or 3 troy ounces).

TINCTURA MATICO.

Tincture of Matico.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Matico, in No. 40 powder	100 Gm.	3 troy ounces.
Diluted Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the Matico with 100 Cc. (or 3 fluidounces) of Diluted Alcohol, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour Diluted Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA RHEI DULCIS.

Sweet Tincture of Rhubarb.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Rhubarb	100 Gm.	3 troy ounces.
Glycyrrhiza	40 Gm.	580 grains.
Anise	40 Gm.	580 grains.
Cardamom	10 Gm.	145 grains.
Glycerin	100 Cc.	3 fluidounces.
Alcohol,		
Water,		
Diluted Alcohol, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Rhubarb, Glycyrrhiza, Anise, and Cardamom, and reduce the mixture to a moderately coarse (No. 40) powder. Mix the Glycerin with 500 Cc. (or 16 fluidounces) of Alcohol and 400 Cc. (or 13 fluidounces) of Water. Moisten the powder with 100 Cc. (or 3 fluidounces)

of the menstruum, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour on the remainder of the menstruum. When the liquid has disappeared from the surface, gradually pour Diluted Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA STRAMONII SEMINIS.

Tincture of Stramonium Seed.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Stramonium Seed, in No. 40 powder	150 Gm.	4½ troy ounces.
Diluted Alcohol, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Moisten the powder with 100 Cc. (or 3 fluidounces) of Diluted Alcohol, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour Diluted Alcohol upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TINCTURA SUMBUL.

Tincture of Sumbul.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Sumbul, in No. 30 powder	100 Gm.	3 troy ounces.
Alcohol,		
Water, each, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix Alcohol and Water in the proportion of 65 *volumes* of Alcohol and 35 *volumes* of Water. Moisten the powder with 100 Cc. (or 3 fluidounces) of the menstruum, and macerate for twenty-four hours; then pack it firmly in a cylindrical percolator, and gradually pour menstruum upon it, until 1000 Cc. (or 32 fluidounces) of Tincture are obtained.

TROCHISCI CATECHU.

Troches of Catechu.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Catechu (Gambir, U. S. P. 1900), in fine powder	6. Gm.	90 grains.
Sugar, in fine powder	65. Gm.	2 troy ounces.
Tragacanth, in fine powder	2. Gm.	30 grains.
Stronger Orange Flower Water, a sufficient quantity		
To make Troches:	100	100

Rub the powders together until they are thoroughly mixed; then, with Stronger Orange Flower Water, form a mass, to be divided into 100 Troches.

TROCHISCI CRETÆ.

Troches of Chalk.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Prepared Chalk	25 Gm.	375 grains.
Acacia, in fine powder	7 Gm.	105 grains.
Spirit of Nutmeg	3 Cc.	45 minims.
Sugar, in fine powder	40 Gm.	600 grains.
Water, a sufficient quantity		
To make Troches:	100	100

Rub the powders with the Spirit of Nutmeg until they are thoroughly mixed; then, with Water, form a mass, to be divided into 100 Troches.

TROCHISCI FERRI.

Troches of Iron.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Ferric Hydroxide, dried at a temperature not exceeding 80° C. (176° F.)	30 Gm.	450 grains.
Vanilla, cut into slices	1 Gm.	15 grains.
Sugar, in fine powder	100 Gm.	1500 grains.
Mucilage of Tragacanth, a sufficient quantity		
To make Troches:	100	100

Rub the Vanilla with a portion of the Sugar to a uniform powder, and afterwards with the Ferric Hydroxide and the remainder of the Sugar, until they are thoroughly mixed. Then, with Mucilage of Tragacanth, form a mass, to be divided into 100 Troches.

TROCHISCI IPECACUANHÆ.

Troches of Ipecac.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Ipecac, in No. 60 powder	2 Gm.	30 grains.
Tragacanth, in fine powder	2 Gm.	30 grains.
Sugar, in fine powder	65 Gm.	2 troy ounces.
Syrup of Orange, a sufficient quantity		
To make Troches:	100	100

Rub the powders together until they are thoroughly mixed; then, with Syrup of Orange, form a mass, to be divided into 100 Troches.

TROCHISCI MAGNESIÆ.

Troches of Magnesia.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Magnesia	19.50 Gm.	300 grains.
Nutmeg, in fine powder	1 Gm.	15 grains.
Sugar, in fine powder	58.5 Gm.	900 grains.
Mucilage of Tragacanth, a sufficient quantity		
To make Troches:	100	100

Rub the Magnesia and the powders together until they are thoroughly mixed; then, with Mucilage of Tragacanth, form a mass, to be divided into 100 Troches.

TROCHISCI MENTHÆ PIPERITÆ.

Troches of Peppermint.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Oil of Peppermint	1 Cc.	15 minims.
Sugar, in fine powder	80 Gm.	2½ troy ounces.
Mucilage of Tragacanth, a sufficient quantity		
To make Troches:	100	100

Rub the Oil of Peppermint and the Sugar together until they are thoroughly mixed; then, with Mucilage of Tragacanth, form a mass, to be divided into 100 Troches.

TROCHISCI MORPHINÆ ET IPECACUANHÆ.

Troches of Morphine and Ipecac.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Morphine Sulphate	0.16 Gm.	2½ grains.
Ipecac, in No. 60 powder	0.50 Gm.	8 grains.
Sugar, in fine powder	65. Gm.	2 troy ounces.
Oil of Gaultheria	0.2 Cc.	3 minims.
Mucilage of Tragacanth, a sufficient quantity		
To make Troches:	100	100

Rub the powders together until they are thoroughly mixed; then add

the Oil of Gaultheria (equivalent to about 4 drops), and incorporate it with the mixture. Lastly, with Mucilage of Tragacanth, form a mass, to be divided into 100 Troches.

TROCHISCI SODII SANTONINATIS.

Troches of Sodium Santoninate.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Sodium Santoninate, in fine powder	6.5 Gm.	100 grains.
Sugar, in fine powder	130 Gm.	2000 grains.
Tragacanth, in fine powder	3.75 Gm.	60 grains.
Orange Flower Water, a sufficient quantity		
To make Troches:	100	100

Rub the powders together until they are thoroughly mixed, then, with Orange Flower Water, form a mass, to be divided into 100 Troches.

Troches of Sodium Santoninate should be kept in dark amber-colored vials.

TROCHISCI ZINGIBERIS.

Troches of Ginger.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Tincture of Ginger	20 Cc.	325 minims.
Tragacanth, in fine powder	4 Gm.	60 grains.
Sugar, in fine powder	130 Gm.	4⅛ troy ounces.
Syrup of Ginger, a sufficient quantity		
To make Troches:	100	100

Mix the Tincture of Ginger with the Sugar, and, having exposed the mixture to the air until dry, reduce it to a fine powder. To this add the Tragacanth, and mix thoroughly. Lastly, with Syrup of Ginger, form a mass, to be divided into 100 Troches.

UNGUENTUM ACIDI GALLICI.

Ointment of Gallic Acid.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Gallic Acid	10 Gm.	150 grains.
Benzoinated Lard	90 Gm.	1350 grains.

Rub the Gallic Acid with the Benzoinated Lard, gradually added, until they are thoroughly mixed, avoiding the use of an iron spatula.

UNGUENTUM MEZEREI.

Mezereum Ointment.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Fluidextract of Mezereum	25 Cc.	400 minims.
Lard	80 Gm.	2½ troy ounces.
Yellow Wax	12 Gm.	180 grains.

Melt together the Lard and Wax with a moderate heat, add the Fluidextract, and stir the mixture constantly until the Alcohol has evaporated; then continue to stir until cool.

UNGUENTUM PLUMBI CARBONATIS.

Ointment of Lead Carbonate.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Lead Carbonate, in very fine powder	10 Gm.	150 grains.
Benzoinated Lard	90 Gm.	1350 grains.

Rub the Lead Carbonate with the Benzoinated Lard, gradually added, until they are thoroughly mixed.

UNGUENTUM PLUMBI IODIDI.

Ointment of Lead Iodide.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Lead Iodide, in very fine powder	10 Gm.	150 grains.
Benzoinated Lard	90 Gm.	1350 grains.

Rub the Lead Iodide with the Benzoinated Lard, gradually added, until they are thoroughly mixed.

UNGUENTUM SULPHURIS ALKALINUM.

Alkaline Sulphur Ointment.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Washed Sulphur	20 Gm.	300 grains.
Potassium Carbonate	10 Gm.	150 grains.
Water	5 Cc.	75 minims.
Benzoinated Lard	65 Gm.	2 troy ounces.

Rub the Sulphur with the Potassium Carbonate and the Water, gradually add the Benzoinated Lard, and mix thoroughly.

VINUM ALBUM FORTIUS.

Stronger White Wine.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
White Wine	875 Gm.	28 fluidounces.
Alcohol	125 Gm.	4 fluidounces.

Mix them.

When tested for Alcohol, Stronger White Wine should contain not less than twenty (20) per cent. nor more than twenty-five (25) per cent. of Absolute Alcohol by weight.

VINUM ALOES.

Wine of Aloes.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Purified Aloes	60 Gm.	925 grains.
Cardamom	10 Gm.	154 grains.
Ginger	10 Gm.	154 grains.
Stronger White Wine, a sufficient quantity		
To make	1000 Gm.	32 troy ounces.

Mix the Aloes, Cardamom, and Ginger, and reduce them to a moderately coarse (No. 40) powder. Macerate the powder with 900 Gm. (or 29 troy ounces) of Stronger White Wine for seven days, with occasional agitation, and filter through paper, adding, through the filter, enough Stronger White Wine to make the filtered liquid weigh 1000 Gm. (or 32 troy ounces).

VINUM COLCHICI RADICIS.

Wine of Colchicum Root.

(U. S. P. 1890.)

	Metric.	*Apothecaries'.*
Colchicum Root, in No. 30 powder	400 Gm.	12 troy ounces.
Alcohol	150 Cc.	5 fluidounces.
White Wine, a sufficient quantity		
To make	1000 Cc.	32 fluidounces.

Mix the Alcohol with 850 Cc. (or 27 fluidounces) of White Wine. Moisten the powder with 100 Cc. (or 3 fluidounces) of the menstruum, pack it moderately in a conical glass percolator, and gradually pour

upon it, first, the remainder of the menstruum, and afterwards enough White Wine to make the product measure 1000 Cc. (or 32 fluidounces).

Caution.—This formula is here given for reference. When *Wine of Colchicum* is prescribed the much weaker *Wine of Colchicum Seed*, U. S. P. VIII (1900), should be dispensed, unless the stronger wine is unequivocally designated.

VINUM RHEI.

Wine of Rhubarb.

(U. S. P. 1880.)

	Metric.	*Apothecaries'.*
Rhubarb, in No. 30 powder	100 Gm.	3 troy ounces.
Calamus, in No. 30 powder	10 Gm.	150 grains.
Stronger White Wine, a sufficient quantity		
To make	1000 Gm.	30 troy ounces.

Moisten the mixed powders with 50 Gm. (or 1½ troy ounces) of Stronger White Wine, pack the mixture in a conical glass percolator, and gradually pour enough Stronger White Wine upon it to make the filtered liquid weigh 1000 Gm. (or 30 troy ounces).

LIST OF PREPARATIONS ADDED TO THE "FORMULARY."

Camphor Menthol.
Elixir Ferri Pyrophosphatis, Quininæ et Strychninæ.
" Gentianæ Glycerinatum.
" Glycerophosphatum.
" Phosphori.
" Terpini Hydrati.
" " " c. Codeina.
" " " c. Heroina.
Emulsum Petrolei.
Essentia Pepsini.
Fluidextractum Rhamni Purshianæ Alkalinum.
Glycerogelatinum Acidi Salicylici 10%.
" Iodoformi.
" Zinci Durum.
Lac Humanisatum.
Liquor Antigerminarus.
" Antisepticus Alkalinus.
" Ferri Albuminati.
" " Oxychloridi.
" " Peptonati.
" " " c. Mangano.
" Hypophosphitum Compositus.
" Potassæ Chlorinatæ.
Magma Magnesiæ.
Mistura Pectoralis—Stokes.
Pasta Dextrinata.
" Ichthyoli, Unna.
" Naphtholi, Lassar.
" Resorcini (Mitis), Lassar.
" Zinci, Lassar.
" " Mollis, Unna.
" " Sulfurata, Unna.
Petrolatum Saponatum Liquidum.
" " Spissum.
Pulvis Antisepticus.
" pro Lacte Humanisato.
Spiritus Phosphori.
Suppositoria Boroglycerini 10%.
Stilus Acidi Salicyl. Dilubilis 10%.
" Cocainæ Dilubilis 5%.
Syrupus Bromidorum.
" Hydrochlorophosphatum Compositus.
Tinctura Tolutana Ætherea.
Unguentum Zinci Extensum 10%.
" Creosoti Salicylatum Extensum 20–10%.
" Hydrargyri Chloridi Corrosivi Extensum.
" Resorcini.
" Salicylatum Extensum 10%.
Zinci Oleo-Stearas.

LIST OF FORMULAS DISMISSED FROM THE NATIONAL FORMULARY AND ADMITTED IN THE U. S. P. VIII.

Aqua Hamamelidis.
Elixir Adjuvans.
" Ferri, Quininæ et Strychninæ Phosphatum.
Emulsum Olei Morrhuæ,
" " " cum Hypophosphitibus.
" " Terebinthinæ.
Extractum Malti.
Fluidextractum Berberidis.
Fluidextractum Rhamni Purshianæ Aromaticum.
Oleatum Quininæ.
Pilulæ Podophylli, Belladonnæ et Capsici.
Pulvis Acetanilidi Compositus.
Syrupus Hypophosphitum Compositus.
Talcum Purificatum.
Vinum Erythroxyli (Cocæ).

LIST OF FORMULAS DISMISSED IN THE U. S. P. VIII AND ADDED TO THE "APPENDIX" IN THIS "FORMULARY."

Antimonii Sulphidum Purificatum.
Antimonium Sulphuratum.
Ceratum Cetacei.
Charta Potassii Nitratis.
Decoctum Cetrariæ.
Decoctum Sarsaparillæ Compositum.
Emplastrum Ammoniaci c. Hydrargyro.
" Arnicæ.
" Ferri.
" Picis Burgundicæ.
" " Cantharidatum.
" Resinæ.
Emulsum Ammoniaci.
Extractum Aconiti.
" Arnicæ Radicis.
" Cinchonæ.
" Conii.
" Iridis.
" Jalapæ.
" Juglandis.
" Podophylli.
" Stramonii Seminis.
" Uvæ Ursi.
Ferri Iodidum Saccharatum.
Fluidextractum Arnicæ Radicis.
" " Asclepiadis.
" " Aspidospermatis.
" " Castaneæ.
" " Colchici Radicis.
" " Cusso.
" " Dulcamaræ.
" " Gossypii Radicis.
" " Iridis.
" " Menispermi.
" " Rumicis.
" " Scoparii.
" " Stramonii Seminis.
Glyceritum Vitelli.
Hydrargyri Subsulphas Flavus.
Infusum Cinchonæ.
Linimentum Sinapis Compositum.
Liquor Ferri Acetatis.
Liquor Ferri Citratis.
" " Nitratis.
Magnesii Citras Effervescens.
Massa Copaibæ.
Oleatum Zinci.
Oleum Phosphoratum.
Pepsinum Saccharatum.
Pilulæ Aloes et Asafœtidæ.
" Antimonii Compositæ.
" Rhei.
Potassa cum. Calce.
" Sulphurata.
Pulvis Antimonialis.
Sodii Carbonas Exsiccatus.
Spiritus Aurantii.
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Note:—To save unnecessary repetition of Latin and English titles, when these are practically identical, such titles, beginning for instance with "Cerate" and "Ceratum," "Liniment" and "Linimentum," "Pilulæ" and "Pills," etc., etc., have been arranged, respectively, in *one* series.

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